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CRPL-F 248 PART B

FOR OFFICIAL DISTRIBUTION

PART B
SOLAR - GEOPHYSICAL DATA

ISSUED
APRIL 1965

U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

SOLAR - GEOPHYSICAL DATA

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The descriptive text was republished in November 1964. Addenda have been given in the introduction to each of the CRPL-F Part B reports, December 1964 through March 1965.

Sunspot Data:

Starting with the Mount Wilson sunspot data for March 1965, the Mount Wilson group number is given for each group. This is the group number of the series which used to be published in the Publications of the Astronomical Society of the Pacific. In the data sent out each month only the groups for which they have magnetic observations are reported. Therefore, the group numbers for the groups for which they do not have magnetic observations will not appear on the monthly data sheets.

Flares:

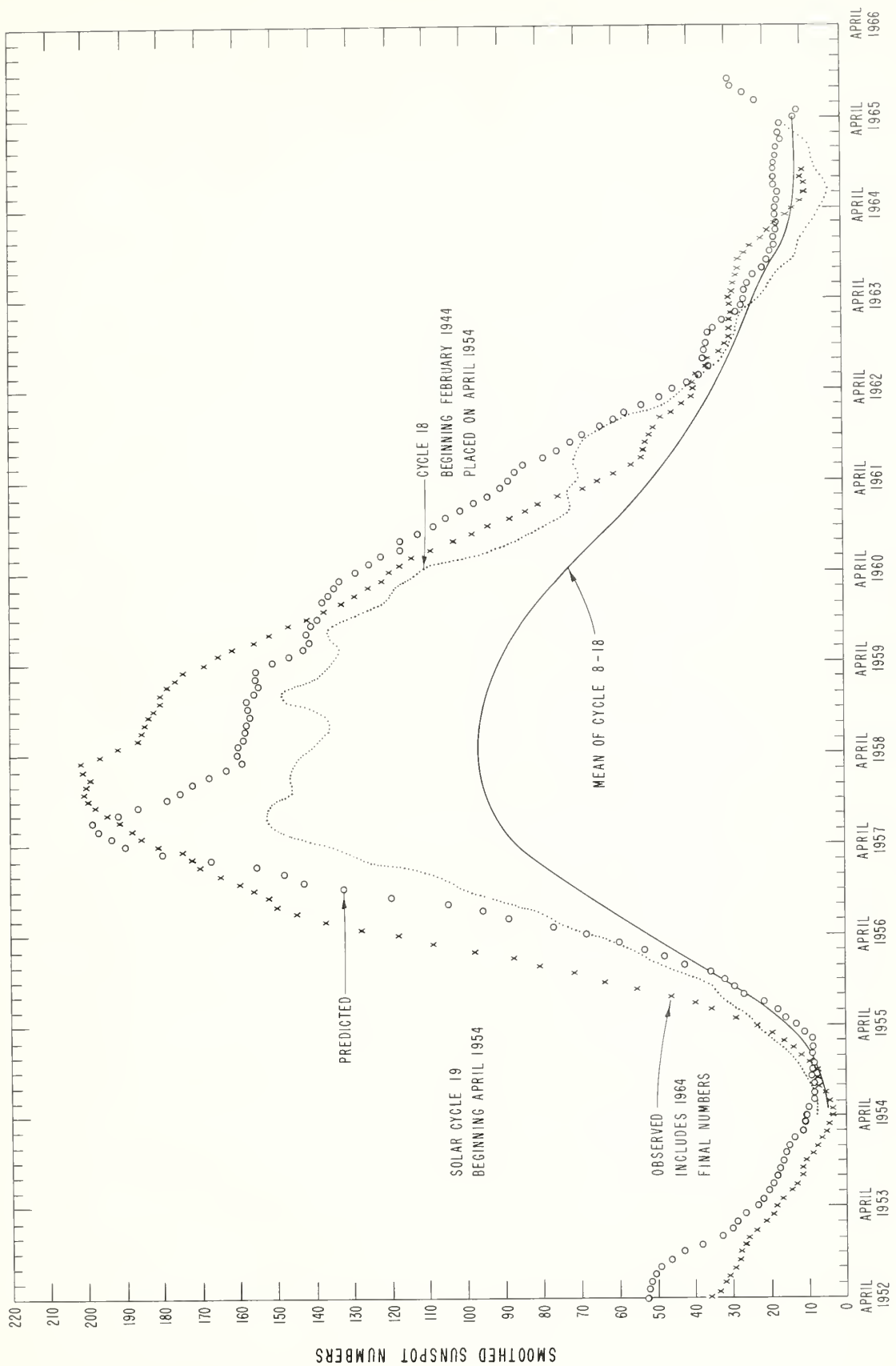
In CRPL-F 244, on text page, "s" flare definition was added to IAU remarks. After consultation with Dr. Michard, a better definition for flare footnote "s" is as follows:

"s" = brightening follows disappearance of filament,
occurs in position of former filament.

DAILY SOLAR INDICES

| Feb. 1965 | American Relative Sunspot Numbers R_A' |
|--------------|--|
| 1 | 13 |
| 2 | 12 |
| 3 | 13 |
| 4 | 11 |
| 5 | 10 |
| 6 | 17 |
| 7 | 19 |
| 8 | 20 |
| 9 | 20 |
| 10 | 22 |
| 11 | 21 |
| 12 | 22 |
| 13 | 22 |
| 14 | 22 |
| 15 | 24 |
| 16 | 14 |
| 17 | 10 |
| 18 | 3 |
| 19 | 0 |
| 20 | 0 |
| 21 | 0 |
| 22 | 0 |
| 23 | 0 |
| 24 | 4 |
| 25 | 14 |
| 26 | 19 |
| 27 | 22 |
| 28 | 19 |
| Mean: | 13.3 |

| March 1965 | Zürich Provisional Relative Sunspot Numbers R_Z | Daily Values Solar Flux at 2800 Mc, Ottawa, Canada Flux | |
|---------------|--|--|-------|
| | | S | S_A |
| 1 | 13 | 76.5 | 75.1 |
| 2 | 0 | 75.3 | 74.0 |
| 3 | 0 | 75.0 | 73.7 |
| 4 | 8 | 75.0 | 73.8 |
| 5 | 7 | 76.1 | 74.8 |
| 6 | 29 | 76.7 | 75.5 |
| 7 | 26 | 77.0 | 75.8 |
| 8 | 7 | 74.5 | 73.4 |
| 9 | 0 | 73.0 | 71.9 |
| 10 | 12 | 73.1 | 72.1 |
| 11 | 9 | 71.9 | 70.9 |
| 12 | 18 | 73.5 | 72.6 |
| 13 | 16 | 75.6 | 74.6 |
| 14 | 17 | 74.6 | 73.7 |
| 15 | 12 | 72.7 | 71.9 |
| 16 | 9 | 71.3 | 70.5 |
| 17 | 11 | 71.6 | 70.8 |
| 18 | 22 | 75.0 | 74.3 |
| 19 | 17 | 77.0 | 76.3 |
| 20 | 19 | 74.4 | 73.8 |
| 21 | 9 | 74.0 | 73.4 |
| 22 | 0 | 72.7 | 72.1 |
| 23 | 0 | 73.0 | 72.5 |
| 24 | 7 | 72.5 | 72.0 |
| 25 | 17 | 73.8 | 73.4 |
| 26 | 10 | 73.3 | 73.0 |
| 27 | 18 | 72.1 | 71.8 |
| 28 | 12 | 71.7 | 71.4 |
| 29 | 9 | 72.0 | 71.7 |
| 30 | 9 | 71.4 | 71.2 |
| 31 | 8 | 71.6 | 71.4 |
| Mean: | 11.3 | 73.8 | 73.0 |



PREDICTED AND OBSERVED SUNSPOT NUMBERS

CALCIUM PLAGE AND SUNSPOT REGIONS

MARCH 1965

| MARCH 1965 | LAT. | MCMATH PLAGE NUMBER | RETURN OF REGION | CALCIUM PLAGE DATA | | | | | | SUNSPOT DATA | | |
|---------------|------|---------------------------|------------------------|--------------------|-------|-----------------|-------------------------|-----------------------|--------------------------------|--------------|-------|------------|
| | | | | CMP VALUES | | HISTORY | AGE (ROTA- TIONS) | DATE FIRST SEEN | DURA- TION (DAYS) (1) | CMP VALUES | | HISTORY |
| | | | | AREA | INT. | | | | | AREA | COUNT | |
| 2.0 | S04 | 7704 (2) | New | 1500 | 2 | $\ell - d$ | 1 | 2/23 | >8 | | | |
| 2.0 | S17 | 7709 | New | 200 | 1.5 | $b - d$ | 1 | 2/27 | ≥ 4 | | | |
| 2.6 | S24 | 7711 (3) | New | 100 | 1 | $b - d$ | 1 | 2/28 | 1 | | | |
| 2.7 | N09 | 7708 | 7661 | 1600 | 2.5 | $\ell - ?$ | 2 | < 2/26 | >5 | | | |
| 2.9 | N22 | 7707 | 7660 | 2300 | 3 | $\ell - ?$ | 2 | < 2/26 | >5 | (97) | (1) | $b - d$ |
| 3.5 | N30 | 7714 | New | 100 | 2 | $b - d$ | 1 | 3/1 | >2 | | | |
| 4.5 | N29 | 7710 | New | (300) | (1) | $\ell - ?$ | 1 | 2/27 | ≥ 4 | | | |
| 5.7 | N28 | 7712 | 7664 | (400) | (2) | $\ell - \ell$ | 3 | 2/28 | 12 | (218) | (2) | $b - d$ |
| 7.8 | N19 | 7716 | New | (400) | (2.5) | $b - \ell$ | 1 | $\leq 3/10$ | >4 | (72) | (3) | $b - \ell$ |
| 8.9 | S34 | 7719 (3) | New | (200) | (1) | $b - d$ | 1 | 3/12 | 1 | | | |
| 10.9 | N11 | 7722 (3) | New | (200) | (3) | $b - d$ | 1 | 3/15 | 1 | | | |
| 12.6 | S12 | 7724 (3) | New | (100) | (1) | $b - d$ | 1 | 3/16 | 1 | | | |
| 12.7 | N23 | 7717 | 7674 | 600 | 1 | $? \setminus d$ | 3 | < 3/10 | >4 | | | |
| 14.4 | N16 | 7726 | New | (100) | (1) | $b - \ell$ | 1 | 3/18 | 2 | | | |
| 14.6 | N24 | 7720 | New | 200 | 2 | $b - d$ | 1 | 3/13 | 3 | | | |
| 15.8 | S12 | 7723 (3) | New | 200 | 1 | $b - d$ | 1 | 3/15 | 1 | | | |
| 16.5 | N29 | 7718 (4) | New | 1300 | 2.5 | ℓ / ℓ | 1 | 3/11 | 12 | 169 | 2 | $b - \ell$ |
| 17.7 | S11 | 7728 (3) | New | (100) | (1.5) | $b - d$ | 1 | 3/19 | 1 | | | |
| 18.5 | N16 | 7729 (3) | New | 200 | 1 | $b - d$ | 1 | 3/19 | 1 | | | |
| 18.7 | S30 | 7730 (3) | New | (100) | (1.5) | $b - d$ | 1 | 3/20 | 1 | | | |
| 19.3 | N02 | 7731 (3) | New | 100 | 1 | $b - d$ | 1 | 3/20 | 1 | | | |
| 19.7 | N30 | 7733 | New | (100) | (1) | $b - d$ | 1 | 3/21 | 2 | | | |
| 19.8 | S18 | 7721 (3) | New | (300) | (1.5) | $\ell - d$ | 1 | 3/13 | 1 | | | |
| 20.0 | S01 | 7725 (3) | New | (100) | (1) | $b - d$ | 1 | 3/16 | 1 | | | |
| 20.6 | S10 | 7727 | New | 200 | 1.5 | $b \wedge d$ | 1 | 3/18 | 4 | | | |
| 23.0 | N05 | 7736 | New | (300) | (3) | $b - \ell$ | 1 | $\leq 3/27$ | ≥ 2 | | | |
| 24.4 | N04 | 7734 (3) | New | 100 | 1.5 | $b - d$ | 1 | 3/24 | 1 | | | |
| 26.0 | N22 | 7732 | New | (400) | (3) | $\ell - d$ | 1 | 3/20 | 3 | | | |
| 27.3 | N21 | 7737 | New | 300 | 2.5 | $b - d$ | 1 | $\leq 3/27$ | ≥ 4 | | | |
| 27.5 | S24 | 7743 (3) | New | (100) | (1.5) | $b - d$ | 1 | 3/30 | ~ 1 | | | |
| 28.3 | N28 | 7738 | New | 200 | 2.5 | $b - d$ | 1 | $\leq 3/27$ | ≥ 4 | | | |
| 28.4 | S07 | 7742 (3) | New | 100 | 1.5 | $b - d$ | 1 | 3/28 | ~ 1 | | | |
| 29.9 | S42 | 7744 (3) | New | 100 | 2 | $b - d$ | 1 | 3/30 | 1 | | | |
| 30.1 | N12 | 7735 | 7708 | 1300 | 3 | $\ell - \ell$ | 3 | 3/24 | 13 | (121) | (1) | $\ell - d$ |
| 30.1 | N23 | 7739 | 7707 | 500 | 1.5 | $b - d$ | 3 | $\leq 3/27$ | >5 | | | |
| 30.6 | S16 | 7740 (3) | New | (200) | (1) | $b - d$ | 1 | 3/27 | ~ 1 | | | |

COMMERCE - STANDARDS - BOULDER

- (1) Due to very poor weather conditions, no calcium spectro heliograms were secured at the McMath-Hulbert Observatory on March 3, 4, 5, 6, 7, 8, 9, 14, 17, 23, 25, 26, and 29, 1965.
- (2) Region 7704 is a new region, in the same position as the ephemeral plage 7666 of the previous rotation.
- (3) These small and ephemeral plages were seen for only one day.
- (4) Region 7718 is new, near the position of 7677 of the previous rotation, but not the same.

MT. WILSON MAGNETIC CLASSIFICATIONS OF SUNSPOTS

11b

MARCH 1965

| MAR. 1965 | TIME MEAS. UT | LAT. | MER. DIST. | TYPE | No. | MAR. 1965 | TIME MEAS. UT | LAT. | MER. DIST. | TYPE | No. |
|--------------|---------------------|------------|---------------|------------------------------|----------------|--------------|---------------------|------------|---------------|------------------------------|----------------|
| 1 | 1940 | S05 | W04 | αf | 15898 | 16 | 1800 | N30 | W05 | βf^* | 15903 |
| 2 | No Spots | | | | | 17 | No Obs. | | | | |
| 3 | 1825 | N30 | E28 | αf^* | 15900 | 18 | 1730 | N28 S12 | W29 E24 | βf^* β^{***} | 15903 15904 |
| 4 | 1800 | N28 | E14 | αp^* | 15900 | 19 | 1830 | N30 | W33 | βf^* | 15903 |
| 5 | 1805 | N13 N29 | W06 E03 | βf αp^{**} | 15901 15900 | 20 | No Obs. | | | | |
| 6-7 | No Obs. | | | | | 21-22 | No Spots | | | | |
| 8 | No Spots | | | | | 23-25 | No Obs. | | | | |
| 9 | No Obs. | | | | | 26 | 1800 | N23 N10 | E08 E43 | αp^* βp | 15906 15905 |
| 10 | 1855 | N20 N18 | W38 W37 | αp^* $\beta +$ | 15902 15900 | 27 | No Obs. | | | | |
| 11-13 | No Obs. | | | | | 28 | 1715 | N11 | E12 | αp | 15905 |
| 14 | 1910 | N31 | E20 | βf^* | 15903 | 29-30 | No Spots | | | | |
| 15 | No Obs. | | | | | 31 | No Obs. | | | | |

COMMERCE - STANDARDS - BOULDER

- * New Cycle
- ** Other small spots in group below threshold of measurement
- *** Old Cycle; reversed polarities
- + Reversed polarities

FINAL CORONAL LINE EMISSION INDICES

IIc

OCTOBER 1964

| CMP Oct 1964 | North East Quadrant (observed 7 days earlier) | | | | South East Quadrant (observed 7 days earlier) | | | | South West quadrant (observed 7 days later) | | | | North West quadrant (observed 7 days later) | | | |
|--------------------|--|----------------|----------------|----------------|--|----------------|----------------|----------------|--|----------------|----------------|----------------|--|----------------|----------------|----------------|
| | G ₆ | G ₁ | R ₆ | R ₁ | G ₆ | G ₁ | R ₆ | R ₁ | G ₆ | G ₁ | R ₆ | R ₁ | G ₆ | G ₁ | R ₆ | R ₁ |
| 1 | 19 | 28 | 11 | 15 | 14 | 18 | 11 | 14 | 9 | 12 | 17 | 28 | 10 | 14 | 17 | 22 |
| 2 | 26 | 35 | 9 | 20 | 12 | 17 | 2 | 8 | 5 | 6 | 13 | 18 | 13 | 26 | 13 | 20 |
| 3 | 31 | 55 | 15 | 40 | 5 | 6 | 1 | 9 | 9 | 11 | 19 | 31 | 17 | 52 | 17 | 28 |
| 4 | 35 | 66 | x | x | 3 | 4 | x | x | 9 | 14 | 13 | 16 | 42 | 62 | 12 | 18 |
| 5 | 16 | 27 | 17 | 23 | 2 | 3 | 8 | 12 | 5 | 8 | 2 | 12 | 48 | 84 | 7 | 17 |
| 6 | 28 | 36 | 10 | 14 | 9 | 12 | 16 | 25 | 8 | 9 | 15 | 20 | 25 | 51 | 16 | 36 |
| 7 | 33 | 38 | x | x | 15 | 18 | x | x | 3 | 11 | 26 | 29 | 24 | 45 | 2 | 4 |
| 8 | x | x | 18 | 25 | x | x | 17 | 22 | 0 | 0 | 10 | 12 | 0 | 0 | 9 | 12 |
| 9 | 23 | 29 | 10 | 12 | 0a | 0a | 10 | 12 | 0a | 0a | x | x | 7a | 14a | x | x |
| 10 | 12 | 17 | 11 | 13 | 7 | 10 | 11 | 15 | 21 | 31 | 13 | 20 | 26 | 33 | 12 | 14 |
| 11 | 4 | 11 | 15 | 20 | 1 | 8 | 21 | 23 | 20 | 25 | 7 | 8 | 21 | 29 | 10 | 16 |
| 12 | 16 | 22 | 15 | 22 | 12 | 13 | 17 | 26 | 2 | 6 | 14 | 18 | 11 | 15 | 18 | 28 |
| 13 | 0 | 3 | 12 | 19 | 0 | 1 | 12 | 14 | 0 | 0 | 21 | 25 | 5 | 8 | 22 | 27 |
| 14 | 12 | 17 | 21 | 35 | 6 | 10 | 19 | 26 | 4 | 6 | 15 | 20 | 9 | 12 | 14 | 18 |
| 15 | 13 | 16 | 11 | 17 | 11 | 16 | 17 | 21 | 2 | 11 | 18 | 20 | 0 | 0 | 19 | 22 |
| 16 | 4 | 6 | 11 | 14 | 4 | 5 | 13 | 21 | 6 | 12 | 16 | 20 | 9 | 15 | 14 | 16 |
| 17 | 10 | 12 | 19 | 28 | 9 | 10 | 15 | 20 | x | x | 16 | 28 | x | x | 3 | 18 |
| 18 | 30 | 51 | 14 | 20 | 18 | 30 | 10 | 14 | 8 | 31 | 30 | 44 | 5 | 22 | 16 | 20 |
| 19 | 25 | 45 | 9 | 20 | 5 | 17 | 7 | 18 | 8 | 14 | 19 | 24 | 12 | 18 | 25 | 44 |
| 20 | 12 | 18 | 27 | 44 | 8 | 10 | 17 | 22 | 2 | 4 | 13 | 17 | 5 | 8 | 12 | 16 |
| 21 | 7 | 14 | 20 | 26 | 2 | 6 | 30 | 38 | 12 | 16 | 12 | 14 | 16 | 19 | 15 | 18 |
| 22 | 0 | 0 | 16 | 19 | 0 | 0 | 12 | 15 | 27 | 37 | 22 | 26 | 46 | 58 | 16 | 24 |
| 23 | 0 | 0 | x | x | 0 | 0 | x | x | 7 | 8 | 11 | 16 | 6 | 7 | 8 | 10 |
| 24 | 6 | 8 | 19 | 27 | 4 | 7 | 19 | 26 | 16 | 32 | 10 | 13 | 12 | 15 | 11 | 13 |
| 25 | 25 | 38 | 17 | 25 | 20 | 29 | 12 | 28 | 18 | 48 | x | x | 10 | 42 | x | x |
| 26 | 13 | 18 | 22 | 32 | 23 | 60 | 23 | 32 | 14 | 31 | 13 | 19 | 7 | 10 | 14 | 22 |
| 27 | 0 | 0 | 19 | 25 | 21 | 34 | 30 | 30 | 15 | 28 | x | x | 17 | 18 | x | x |
| 28 | 9 | 12 | 17 | 20 | 7 | 9 | 14 | 16 | 23 | 29 | 0 | 0 | 21 | 24 | 12 | 24 |
| 29 | 28 | 73 | 24 | 40 | 4 | 11 | 19 | 20 | x | x | x | x | x | x | x | x |
| 30 | 31 | 63 | 29 | 64 | 6 | 7 | 16 | 20 | x | x | 18 | 22 | x | x | 20 | 37 |
| 31 | x | x | 35 | 58 | x | x | 9 | 28 | 3 | 8 | 19 | 21 | 19 | 36 | 18 | 30 |

x = no observations

* = yellow line emission

a = index computed from low weight data

COMPARISON - STANDARDS - BOULDER

FINAL CORONAL LINE EMISSION INDICES

NOVEMBER 1964

| CMP Nov 1964 | North East Quadrant (observed 7 days earlier) | | | | South East Quadrant (observed 7 days earlier) | | | | South West Quadrant (observed 7 days later) | | | | North West Quadrant (observed 7 days later) | | | |
|--------------------|--|----------------|----------------|----------------|--|----------------|----------------|----------------|--|----------------|----------------|----------------|--|----------------|----------------|----------------|
| | G ₆ | G ₁ | R ₆ | R ₁ | G ₆ | G ₁ | R ₆ | R ₁ | G ₆ | G ₁ | R ₆ | R ₁ | G ₆ | G ₁ | R ₆ | R ₁ |
| 1 | 44 | 62 | 23 | 37 | 0 | 0 | 11 | 16 | 19 | 33 | x | x | 41 | 57 | x | x |
| 2 | 21 | 39 | 26 | 32 | 7 | 10 | 26 | 44 | 11 | 12 | 25 | 28 | 28 | 32 | 11 | 17 |
| 3 | 21 | 39 | 10 | 13 | 1 | 4 | 13 | 16 | 16 | 19 | 32 | 64 | 24 | 38 | 29 | 54 |
| 4 | 59 | 79 | 11 | 16 | 20 | 24 | 9 | 12 | 8 | 11 | 21 | 36 | 30 | 44 | 14 | 21 |
| 5 | 50 | 65 | 14 | 25 | 35 | 39 | 12 | 28 | 0 | 0 | 20 | 26 | 13 | 27 | 19 | 26 |
| 6 | 10 | 13 | 9 | 12 | 4 | 6 | 8 | 8 | 3 | 4 | 23 | 25 | 13 | 20 | 24 | 30 |
| 7 | 19 | 28 | 17 | 22 | 1 | 7 | 15 | 17 | x | x | x | x | 14 | x | x | x |
| 8 | 7 | 20 | x | x | 0 | 0 | x | x | 6 | 8 | 16 | 19 | 14 | 18 | 17 | 20 |
| 9 | 10 | 16 | 15 | 24 | 4 | 6 | 14 | 16 | x | x | x | x | x | x | x | x |
| 10 | 25 | 30 | x | x | 10 | 11 | x | x | 9 | 12 | 14 | 20 | 15 | 22 | 22 | 28 |
| 11 | 20 | 22 | 19 | 34 | 22 | 27 | 8 | 20 | x | x | x | x | x | x | x | x |
| 12 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 13 | 4 | 6 | 16 | 17 | 0 | 3 | 18 | 23 | 3 | 6 | 21 | 28 | 12 | 15 | 25 | 32 |
| 14 | 7 | 10 | 14 | 16 | 3 | 4 | 25 | 27 | 3 | 4 | 19 | 26 | 14 | 27 | 19 | 24 |
| 15 | 23 | 28 | x | x | 15 | 25 | x | x | 2 | 4 | 25 | 29 | 12 | 31 | 25 | 47 |
| 16 | 15 | 17 | 16 | 23 | 8 | 10 | 22 | 33 | 3 | 4 | 12 | 16 | 17 | 42 | 14 | 20 |
| 17 | 25 | 33 | 32 | 53 | 21 | 26 | 36 | 51 | x | x | x | x | x | x | x | x |
| 18 | 23 | 31 | 27 | 47 | 14 | 22 | 23 | 35 | 3 | 4 | 25 | 35 | 5 | 6 | 20 | 25 |
| 19 | 5 | 8 | 24 | 26 | 2 | 4 | 17 | 20 | 5 | 8 | 15 | 17 | 4 | 4 | 15 | 18 |
| 20 | 4 | 6 | 24 | 30 | 5 | 7 | 17 | 20 | 28 | 36 | 22 | 25 | 26 | 31 | 22 | 35 |
| 21 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 22 | 14 | 24 | 15 | 20 | 13 | 42 | 13 | 25 | 15 | 25 | 11 | 13 | 7 | 9 | 17 | 20 |
| 23 | x | x | x | x | x | x | x | x | 10 | 12 | 9 | 10 | 9 | 10 | 23 | 48 |
| 24 | 10 | 12 | 10 | 14 | 8 | 13 | 8 | 10 | 6 | 9 | 10 | 12 | 11 | 22 | 18 | 27 |
| 25 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 26 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 27 | 18 | 33 | 16 | 20 | 6 | 9 | 18 | 21 | x | x | x | x | x | x | x | x |
| 28 | 11 | 27 | 11 | 14 | 3 | 6 | 15 | 18 | 8 | 16 | 14 | 18 | 11 | 16 | 10 | 12 |
| 29 | 5 | 7 | 19 | 26 | 2 | 4 | 24 | 26 | 3 | 5 | 10 | 12 | 8 | 10 | 8 | 9 |
| 30 | 8 | 10 | 11 | 12 | 3 | 4 | 12 | 14 | 5 | 7 | 14 | 20 | 7 | 9 | 14 | 16 |

x = no observations

* = yellow line emission

a = index computed from low weight data

COMBINE - STANDARDS - BOLDER

FINAL CORONAL LINE EMISSION INDICES

DECEMBER 1964

| CMP Dec 1964 | North East Quadrant (observed 7 days earlier) | | | | South East Quadrant (observed 7 days earlier) | | | | South West Quadrant (observed 7 days later) | | | | North West Quadrant (observed 7 days later) | | | |
|--------------------|--|----------------|----------------|----------------|--|----------------|----------------|----------------|--|----------------|----------------|----------------|--|----------------|----------------|----------------|
| | G ₆ | G ₁ | R ₆ | R ₁ | G ₆ | G ₁ | R ₆ | R ₁ | G ₆ | G ₁ | R ₆ | R ₁ | G ₆ | G ₁ | R ₆ | R ₁ |
| 1 | x | x | x | x | x | x | x | x | 0 | 0 | 11 | 12 | 0 | 0 | 12 | 16 |
| 2 | 8 | 12 | 24 | 27 | 3 | 4 | 24 | 27 | 13 | 15 | x | x | 16 | 19 | x | x |
| 3 | 10 | 12 | 17 | 20 | 3 | 4 | 12 | 15 | 0 | 0 | 13 | 16 | 1 | 6 | 16 | 24 |
| 4 | 28 | 33 | 15 | 22 | 19 | 21 | 27 | 34 | 2 | 3 | 12 | 14 | 10 | 15 | 13 | 19 |
| 5 | x | x | x | x | x | x | x | x | 3 | 4 | 19 | 22 | 11 | 16 | 21 | 26 |
| 6 | 16 | 30 | 20 | 23 | 2 | 3 | 18 | 21 | 3 | 6 | 14 | 20 | 16 | 21 | 16 | 26 |
| 7 | 27 | 57 | 21 | 27 | 5 | 6 | 11 | 14 | 2 | 3 | 18 | 20 | 22 | 30 | 22 | 28 |
| 8 | 35 | 75 | 20 | 33 | 4 | 5 | 14 | 16 | x | x | x | x | x | x | x | x |
| 9 | x | x | x | x | x | x | x | x | 18 | 28 | 7 | 12 | 46 | 82 | 35 | 56 |
| 10 | x | x | x | x | x | x | x | x | 13 | 15 | 7 | 8 | 62 | 88 | 18 | 32 |
| 11 | x | x | x | x | x | x | x | x | 13 | 14 | 8 | 12 | 37 | 53 | 19 | 29 |
| 12 | 17 | 36 | 23 | 30 | 6 | 8 | 19 | 22 | 17 | 22 | 9 | 16 | 35 | 53 | 16 | 41 |
| 13 | 12 | 27 | 12 | 18 | 3 | 4 | 12 | 14 | x | x | x | x | x | x | x | x |
| 14 | 8 | 15 | 14 | 16 | 7 | 10 | 18 | 23 | x | x | x | x | x | x | x | x |
| 15 | 34 | 55 | 15 | 19 | 34 | 46 | 23 | 30 | x | x | x | x | x | x | x | x |
| 16 | 22 | 26 | x | x | 43 | 73 | x | x | 22 | 40 | 22 | 30 | 10 | 30 | 28 | 40 |
| 17 | 3 | 11 | 28 | 33 | 5 | 22 | 26 | 34 | x | x | x | x | x | x | x | x |
| 18 | 5 | 6 | 15 | 17 | 11 | 30 | 16 | 21 | x | x | x | x | x | x | x | x |
| 19 | 6 | 9 | 18 | 21 | 10 | 21 | 16 | 20 | 10 | 16 | 15 | 16 | 6 | 8 | 23 | 31 |
| 20 | 5 | 6 | 14 | 18 | 6 | 9 | 13 | 17 | x | x | x | x | x | x | x | x |
| 21 | 6 | 8 | 21 | 26 | 5 | 14 | 13 | 16 | x | x | x | x | x | x | x | x |
| 22 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 23 | 32 | 44 | 24 | 38 | 18 | 21 | 11 | 14 | 0 | 0 | 16 | 22 | 0 | 0 | 13 | 17 |
| 24 | 38 | 73 | 19 | 23 | 14 | 18 | 10 | 19 | x | x | x | x | x | x | x | x |
| 25 | 35 | 61 | 26 | 35 | 16 | 28 | 17 | 23 | x | x | x | x | x | x | x | x |
| 26 | 43 | 58 | 37 | 50 | 22 | 24 | 36 | 61 | 19 | 23 | 18 | 31 | 25 | 28 | 19 | 28 |
| 27 | x | x | x | x | x | x | x | x | 3 | 4 | 16 | 20 | 7 | 12 | 13 | 16 |
| 28 | x | x | x | x | x | x | x | x | 27 | 32 | 12 | 15 | 27 | 38 | 14 | 25 |
| 29 | x | x | x | x | x | x | x | x | 2 | 3 | 22 | 30 | 21 | 40 | 20 | 25 |
| 30 | 4 | 5 | 23 | 26 | 1 | 3 | 22 | 30 | x | x | x | x | x | x | x | x |
| 31 | x | x | x | x | x | x | x | x | 8 | 10 | x | x | 33 | 71 | x | x |

x = no observations

* = yellow line emission

a = index computed from low weight data

COMMENTS -

STANDARD

BOULDER

PROVISIONAL CORONAL LINE EMISSION INDICES

FEBRUARY 1965

| CMP Feb 1965 | North East Quadrant (observed 7 days earlier) | | | | South East Quadrant (observed 7 days earlier) | | | | South West Quadrant (observed 7 days later) | | | | North West Quadrant (observed 7 days later) | | | |
|--------------------|--|----------------|----------------|----------------|--|----------------|----------------|----------------|--|----------------|----------------|----------------|--|----------------|----------------|----------------|
| | G ₆ | G ₁ | R ₆ | R ₁ | G ₆ | G ₁ | R ₆ | R ₁ | G ₆ | G ₁ | R ₆ | R ₁ | G ₆ | G ₁ | R ₆ | R ₁ |
| 1 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 2 | 8 | 16 | 12 | 15 | 7 | 8 | 12 | 16 | x | x | x | x | x | x | x | x |
| 3 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 4 | 29 | 45 | 11 | 16 | 5 | 8 | 16 | 28 | x | x | x | x | x | x | x | x |
| 5 | 27 | 59 | 20 | 27 | 6 | 7 | 24 | 33 | 4 | 4 | 6 | 11 | 20 | 36 | 11 | 20 |
| 6 | x | x | x | x | x | x | x | x | 1 | 3 | 22 | 32 | 32 | 28 | 22 | 32 |
| 7 | 22 | 33 | x | x | 4 | 5 | x | x | 3 | 5 | 10 | 14 | 9 | 13 | 7 | 9 |
| 8 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 9 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 10 | x | x | x | x | x | x | x | x | 1 | 4 | 10 | 16 | 9 | 11 | 15 | 17 |
| 11 | 16 | 36 | 16 | 25 | 1 | 3 | 9 | 17 | 3 | 5 | 13 | 16 | 10 | 18 | 9 | 16 |
| 12 | x | x | 14 | 24 | x | x | 12 | 16 | 0 | 0 | 8 | 9 | 19 | 59 | 10 | 16 |
| 13 | x | x | x | x | x | x | x | x | 0 | 0 | 12 | 15 | 15 | 31 | 14 | 21 |
| 14 | x | x | x | x | x | x | x | x | 0 | 0 | 19 | 21 | 11 | 28 | 15 | 20 |
| 15 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 16 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 17 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 18 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 19 | 4 | 7 | 3 | 5 | 3 | 4 | 2 | 3 | x | x | x | x | x | x | 3 | 10 |
| 20 | 7 | 11 | 14 | 25 | 0 | 0 | 12 | 20 | x | x | x | x | x | x | x | x |
| 21 | 5 | 7 | 9 | 12 | 4 | 5 | 6 | 7 | x | x | x | x | x | x | x | x |
| 22 | x | x | x | x | x | x | x | x | 7 | 10 | 15 | 20 | 8 | 12 | 8 | 8 |
| 23 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 24 | 8 | 14 | 15 | 23 | 5 | 7 | 13 | 15 | x | x | x | x | x | x | x | x |
| 25 | 17 | 33 | 12 | 14 | 2 | 3 | 15 | 17 | 0 | 0 | x | x | 8 | 20 | x | x |
| 26 | 26 | 62 | 14 | 19 | 0 | 0 | 12 | 16 | 5 | 8 | 12 | 15 | 8 | 16 | 16 | 20 |
| 27 | 3 | 8 | 12 | 14 | 0 | 0 | 14 | 21 | 4 | 18 | 12 | 13 | 14 | 18 | 7 | 9 |
| 28 | 2 | 8 | 16 | 20 | 6 | 22 | 16 | 21 | x | x | x | x | x | x | x | x |

x = no observations

* = yellow line emission

a = index computed from low weight data

COMMERCE - STANDARDS - BOULDER

PROVISIONAL CORONAL LINE EMISSION INDICES

MARCH 1965

| CMP Mar 1965 | North East quadrant (observed 7 days earlier) | | | | South East quadrant (observed 7 days earlier) | | | | South West quadrant (observed 7 days later) | | | | North West quadrant (observed 7 days later) | | | |
|--------------------|--|----------------|----------------|----------------|--|----------------|----------------|----------------|--|----------------|----------------|----------------|--|----------------|----------------|----------------|
| | G ₆ | G ₁ | R ₆ | R ₁ | G ₆ | G ₁ | R ₆ | R ₁ | G ₆ | G ₁ | R ₆ | R ₁ | G ₆ | G ₁ | R ₆ | R ₁ |
| 1 | x | x | x | x | x | x | x | x | x | x | x | 24 | x | x | 11 | 19 |
| 2 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 3 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 4 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 5 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 6 | x | x | x | x | x | x | x | x | 2 | 4 | 6 | 7 | 5 | 7 | 4 | 5 |
| 7 | x | x | x | x | x | x | x | 18 | 2 | 3 | 2 | 3 | 9 | 17 | 3 | 4 |
| 8 | 11 | 20 | 10 | 17 | 8 | 9 | 10 | x | x | x | 11 | 14 | x | x | 1 | 8 |
| 9 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 10 | x | x | x | x | x | x | x | x | 2 | 3 | 1 | 2 | 4 | 6 | 5 | 6 |
| 11 | 8 | 11 | 11 | 17 | 9 | 14 | 9 | 12 | x | x | x | x | x | x | x | x |
| 12 | 9 | 11 | 11 | 14 | 9 | 19 | 9 | 12 | x | x | x | x | x | x | x | x |
| 13 | 7 | 17 | x | x | 0 | 0 | x | x | x | x | x | x | x | x | x | x |
| 14 | x | x | x | x | x | x | x | 38 | x | x | x | x | x | x | x | x |
| 15 | x | x | 11 | 13 | x | x | 16 | x | x | x | x | x | x | x | x | x |
| 16 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 17 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 18 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 19 | x | x | x | x | x | x | x | x | 2 | 4 | 6 | 9 | 3 | 4 | 7 | 8 |
| 20 | 4 | 6 | 5 | 6 | 2 | 4 | 5 | 6 | 3 | 6 | x | x | 3 | 3 | x | x |
| 21 | 2 | 3 | 9 | 11 | 2 | 3 | 8 | 12 | x | x | x | x | x | x | x | x |
| 22 | x | x | 12 | 19 | x | x | 7 | 8 | 3 | 5 | 16 | 20 | 7 | 9 | 14 | 24 |
| 23 | x | x | x | x | x | x | x | x | x | x | 6 | x | x | x | 6 | 9 |
| 24 | 3 | 4 | 3 | 5 | 1 | 2 | 2 | 3 | 4 | 5 | 6 | 8 | 7 | 9 | 10 | 13 |
| 25 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 26 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 27 | x | x | x | x | x | x | x | x | 3 | 3 | 8 | 10 | 4 | 4 | 9 | 15 |
| 28 | x | x | x | x | x | x | x | x | x | 4 | x | x | x | x | x | x |
| 29 | x | x | x | x | x | x | x | x | 3 | 4 | x | x | 13 | 20 | 9 | 23 |
| 30 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 31 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x | x |

x = no observations

* = yellow line emission

a = index computed from low weight data

CONFIDENTIAL - STATIONARY - POLAR

SOLAR FLARES

MARCH 1965

| OBSERVATORY | DATE | OBSERVED TIME | | LOCATION | | DURA- TION -- MINUTES | IM- POR- TANCE | OBS COND. | TIME -- U T | MEASUREMENTS | | | REMARKS |
|-------------|-------------|---------------|--------|-----------------|--------------|--------------------------------|----------------------|--------------|-------------------|------------------------|------------------------|--------------------|---------|
| | | START | END | APPROX. LAT. | MER DIST. | MATH PLAGE REGION | | | | MEAS AREA Sq Deg | CORR AREA Sq Deg | MAX WIDTH Ha | |
| LOCK | MAR 01 1965 | 1800 | 1823 | N02 | W32 | 7713 | 1- | C | 1807 | .20 | .20 | 10 | |
| LOCK | | 1821 | 1834 | N18 | E01 | 7707 | 1- | C | 1826 | .20 | .20 | 10 | |
| CAPS | 02 | 1253 | 1309 | N31 | E38 | 7712 | 1- | 3 | 1258 | .60 | 1.00 | 135 | GH |
| OTTA | 02 | 1549 | 1612 | N21 | W00 | 7707 | 1- | C | 1556 | .91 | .92 | | |
| OTTA | 02 | 1553 | 1622 | S06 | E13 | 7704 | 1- | C | 1559 | .31 | .31 | | E |
| SACP | 04 | 1539 | 1600 | N25 | W13 | 7707 | 1- | C | | .41 | .44 | 17 | |
| HALE | 04 | 1920 | 1950 | N28 | E14 | 7712 | 1- | 3 | 1933 | .20 | .20 | | |
| HALE | 05 | 0023 | 0040 | N12 | E76 | | 1- | C | | .34 | .84 | 17 | |
| HALE | 05 | 0024 | 0049 | N12 | E80 | | 1- | 4 | 0032 | .20 | | | |
| LOCK | 05 | 0024 | 0040 D | N29 | E11 | 7712 | 1- | C | 0031 | .30 | .30 | 20 | |
| SACP | 05 | 0025 | 0044 | N30 | E11 | 7712 | 1- | C | | .59 | .66 | 18 | |
| HALE | 05 | 0026 | 0057 | N28 | E10 | 7712 | 1- | 2 | 0032 | .80 | .90 | | H |
| IKOM | 05 | 0028 E | 0040 | N30 | E12 | 7712 | 12 D | V | 0030 | 1.80 | 2.20 | 110 | D |
| HALE | 05 | 0111 | 0145 | N30 | E12 | 7712 | 1- | 2 | 0114 | .80 | .90 | | FK |
| HALE | 05 | 0111 | 0145 | N30 | E12 | 7712 | 1- | 2 | 0121 | 1.00 | 1.10 | | |
| IKOM | 05 | 0120 E | 0128 D | N28 | E10 | 7712 | 8 D | V | 0120 | 2.80 | 3.50 | 100 | E |
| MANI | 05 | 0128 | 0138 | N31 | E13 | 7712 | 1- | 2 | 0130 | .15 | .15 | | |
| HALE | 05 | 0212 | 0228 | N13 | E02 | | 1- | 4 | 0218 | .20 | .20 | | H |
| HALE | 05 | 0229 | 0310 | N13 | E02 | | 1- | 3 | 0241 | .40 | .40 | | |
| CAPS | 06 | 0740 E | 0756 D | N21 | W50 | 7707 | 1- | 3 | 0742 | .60 | 1.00 | 160 | DGJ |
| BUCA | 06 | 0745 E | 0811 | N24 | W50 | 7707 | 1- | 3 | | 1.00 | 1.00 | GS | |
| CATA | 06 | 0745 | 0915 D | N22 | W50 | 7707 | 1- | 3 | 0800 | .58 | .98 | 159 | GS |
| BUCA | 06 | 0829 E | 0910 D | N24 | W50 | 7707 | 1- | 3 | | 1.50 | 1.50 | | |
| SACP | 06 | 1814 | 1920 | N32 | W11 | 7712 | 1- | C | | 1.51 | 1.70 | 18 | |
| HALE | 06 | 1817 E | 1848 | N30 | W13 | 7712 | 1- | 2 | 1839 | .30 | .30 | | |
| HALE | 06 | 1817 E | 1933 | N32 | W12 | 7712 | 1- | 2 | 1839 | .40 | .40 | | |
| HALE | 06 | 1858 | 1950 | N35 | W10 | 7712 | 1- | 3 | 1907 | .30 | .30 | | |
| HALE | 06 | 1830 | 1900 | N18 | W57 | 7707 | 1- | 3 | 1841 | .40 | .60 | | |
| HALE | 06 | 1859 | 1922 | N21 | W56 | 7707 | 1- | 3 | 1910 | .50 | .80 | | |
| HALE | 06 | 1919 | 1948 | N17 | W58 | 7707 | 1- | 3 | 1924 | .20 | .30 | | |
| HALE | 06 | 1945 | 1953 | N18 | W57 | 7707 | 1- | 4 | 1946 | .50 | .80 | | |
| HALE | 06 | 1955 | 2042 | N18 | W57 | 7707 | 1- | 3 | 2003 | 1.20 | 1.90 | | H |
| HALE | 06 | 2100 | 2142 | N18 | W57 | 7707 | 1- | 3 | 2115 | 1.00 | 1.60 | | |
| HALE | 06 | 2200 | 2216 | N17 | W58 | 7707 | 1- | 3 | 2205 | .40 | .60 | | |
| HALE | 07 | 0141 | 0153 | N30 | W15 | 7712 | 1- | 3 | 0144 | .80 | .90 | | |
| SACP | 07 | 1602 | 1620 U | N21 | W67 | 7707 | 1- | C | | .96 | 1.88 | 18 | E |
| HUAN | 07 | 1604 | 1627 | N22 | W68 | 7707 | 1- | P | 1611 | .20 | | | D |
| IKOM | 07 | 2305 | 2321 D | N15 | W37 | | 16 D | C | | | | | |
| HUAN | 08 | 1300 | 1304 | N15 | W45 | | 1- | C | 1302 | .10 | .15 | | DG |
| LOCK | 08 | 1740 | 1810 | N19 | W90 | 7707 | 1- | C | 1800 | .30 | 1.50 | 20 | |
| HALE | 08 | 2240 | 2254 D | N13 | W50 | | 1- | 3 | 2245 | .20 | .30 | | |
| LOCK | 08 | 2351 | 2359 | N26 | W45 | 7712 | 1- | C | 2355 | .20 | .40 | 20 | |
| HALE | 08 | 2353 | 2358 | N27 | W46 | 7712 | 1- | 3 | 2354 | .20 | .30 | | |
| IKOM | 08 | 2354 | 2357 D | N30 | W41 | 7712 | 1- | V | 2354 | .40 | .60 | 70 | DG |
| IKOM | 09 | 0055 E | 0100 D | N20 | W85 | 7707 | 1- | V | | | | | |

SOLAR FLARES

MARCH 1965

| OBSERVATORY | DATE | OBSERVED UNIVERSAL TIME | | LOCATION | | | DURA- TION — MINUTES | IM- POR- TANCE | OBS. COND. | TIME — U T | MEASUREMENTS | | | MAX WIDTH He | MAX INT % | REMARKS |
|-------------|-------------|-------------------------|--------|---------------|-------------|------------------|-------------------------------|----------------------|---------------|------------------|------------------------|-------------------------|--|--------------------|-----------------|---------|
| | | START | END | APPROX LAT | MER DIST | PLACHT REGION | | | | | MEAS AREA Sq Deg | CORR. AREA Sq Deg | | | | |
| IKOM | MAR 09 1965 | 0516 E | 0528 D | N10 W90 | | 7708 | 12 D | 1 | V | 2312 | .80 | 1.00 | | 80 | A | |
| IKOM | 09 | 2306 | 2340 D | N20 W26 | | 7716 | | 1- | V | | | | | | | |
| ARCE | 10 | 0850 E | 0910 D | N19 W33 | | 7716 | | 1- | 3 | 0910 | .39 | .48 | | 129 | | |
| CATA | 10 | 0905 E | 0925 D | N19 W33 | | 7716 | | 1- | S | 0906 | .72 | .94 | | | | |
| MCMA | 11 | 1343 | 1354 | N29 W84 | | 7712 | | 1- | 1 C | 1346 | .20 | | | | DH | |
| MANI | 12 | 0825 | 0838 | N31 E61 | | 7718 | | 1- | 2 | 0828 | .17 | .29 | | | | |
| ARCE | 12 | 0830 E | 0919 D | N32 E53 | | 7718 | 49 D | 1 | 3 | 0919 | 1.07 | 2.02 | | | | |
| ARCE | 12 | 1000 E | | N32 E53 | | 7718 | | 1- | 3 | 1000 | .78 | 1.47 | | | | |
| OTTA | 12 | 1213 | 1226 | N31 E52 | | 7718 | | 1- | C | 1217 | .46 | .71 | | | EF | |
| OTTA | 12 | 1242 | 1317 | N29 E43 | | 7718 | | 1- | C | 1307 | .11 | .15 | | | H | |
| MCMA | 12 | 1306 E | 1402 | N32 E51 | | 7718 | | 1- | 2 P | 1310 | .80 | 1.70 | | | EHK | |
| KANZ | 12 | 1309 E | 1329 D | N32 E54 | | 7718 | 20 D | 1 | | | | | | | | |
| KANZ | 12 | 1331 E | 1337 D | N32 E54 | | 7718 | | 1- | | | | | | | | |
| KANZ | 12 | 1345 E | 1354 D | N32 E54 | | 7718 | | 1- | | | | | | | | |
| SACP | 12 | 1411 E | 1422 | N28 E47 | | 7718 | | 1- | C | | .42 | .60 | | 18 | | |
| OTTA | 12 | 1414 | 1421 | N29 E48 | | 7718 | | 1- | C | 1416 | .72 | 1.02 | | | | |
| MCMA | 12 | 1415 | 1421 | N29 E48 | | 7718 | | 1- | 1 C | 1416 | .30 | .60 | | | D | |
| OTTA | 12 | 1450 | 1512 | N31 E50 | | 7718 | | 1- | C | 1458 | .28 | .43 | | | D | |
| MCMA | 12 | 1453 | 1507 | N31 E52 | | 7718 | | 1- | 1 C | 1456 | .20 | .40 | | | D | |
| HUAN | 12 | 1505 E | 1511 | N30 E52 | | 7718 | | 1- | P | 1508 | .16 | .32 | | 17 | | |
| SACP | 12 | 1526 | 1544 | N28 E46 | | 7718 | | 1- | C | | .46 | .65 | | | | |
| OTTA | 12 | 1527 | 1550 | N29 E46 | | 7718 | | 1- | C | 1536 | .28 | .40 | | | H | |
| MCMA | 12 | 1528 | 1539 | N29 E47 | | 7718 | | 1- | 1 C | 1535 | .20 | .40 | | | DH | |
| HUAN | 12 | 1532 E | 1537 D | N28 E50 | | 7718 | | 1- | P | 1533 | .16 | .30 | | | DC | |
| MCMA | 12 | 1618 | 1626 | N29 E46 | | 7718 | | 1- | 1 C | 1624 | .20 | .40 | | | DH | |
| HUAN | 12 | 1621 | 1634 | N28 E49 | | 7718 | | 1- | C | 1625 | .25 | .46 | | | D | |
| SACP | 12 | 1621 | 1636 U | N28 E46 | | 7718 | | 1- | C | | .37 | .52 | | 17 | | |
| MCMA | 12 | 1651 | 1704 | N31 E49 | | 7718 | | 1- | 1 C | 1652 | .20 | .40 | | | DH | |
| OTTA | 12 | 1651 | 1707 | N31 E47 | | 7718 | | 1- | C | 1652 | | | | | | |
| HALE | 12 | 1939 | 1956 | N27 E44 | | 7718 | | 1- | 3 | 1947 | .20 | .30 | | | H | |
| HALE | 12 | 2010 | 2020 | N30 E45 | | 7718 | | 1- | 3 | 2011 | .50 | .75 | | | H | |
| HALE | 12 | 2012 | 2035 | N28 E43 | | 7718 | | 1- | 3 | 2016 | .40 | .60 | | | H | |
| HALE | 12 | 2046 | 2054 D | N27 E43 | | 7718 | | 1- | 3 | 2050 | .20 | .30 | | | H | |
| HALE | 12 | 2102 | 2112 D | N27 E43 | | 7718 | | 1- | 2 | 2107 | .20 | .30 | | | H | |
| HALE | 12 | 2213 E | 2224 | N28 E42 | | 7718 | | 1- | 4 | 2215 | .40 | .60 | | | | |
| SACP | 13 | 2050 | 2106 | N31 E34 | | 7718 | | 1- | C | | .92 | 1.17 | | 20 | | |
| LOCK | 14 | 1845 | 1905 | N50 W75 | | | | 1- | C | 1855 | .10 | .50 | | 10 | | |
| OTTA | 15 | 1420 | 1445 | N25 W14 | | 7720 | | 1- | C | 1422 | .11 | .12 | | | H | |
| MCMA | 16 | 1633 | 1705 | N31 E03 | | 7718 | | 1- | 2 P | 1636 | .30 | .40 | | | DH | |
| MCMA | 16 | 1826 E | 1847 D | N32 W02 | | 7718 | | 1- | 1 P | 1830 | .20 | .20 | | | SLH | |
| WEND | 18 | 0825 E | 0928 D | N30 W23 | | 7718 | 63 D | 1 | S | | 4.00 | 3.11 | | 141 | | |
| CATA | 18 | 0830 | 1200 D | N27 W27 | | 7718 | 210 D | 1 | | 0938 | 2.24 | 1.41 | | | | |
| ARCE | 18 | 0858 E | 1000 D | N28 W26 | | 7718 | | 1- | 2 | 0925 | 1.05 | | | | | |

SOLAR FLARES

MARCH 1965

| OBSERVATORY | DATE | OBSERVED UNIVERSAL TIME | | LOCATION | | DURA- TION — MINUTES | IM- POR- TANCE | OBS COND. | TIME — U.T. | MEASUREMENTS | | MAX WIDTH H _α | MAX INT H _α | REMARKS |
|-------------|-------------|-------------------------|--------|-----------------|--------------|-------------------------------|----------------------|--------------|-------------------|-------------------------|------------------------|--------------------------------|------------------------------|---------|
| | | START | END | APPROX. LAT. | MER DIST. | MM/MT PLACE REGION | | | | MEAS. AREA Sq Deg | CORR AREA Sq Deg | | | |
| ONDR | 18 MAR 1965 | 0941 E | 0959 | N28 W24 | | 7718 | 1- | 3 | 0943 | .84 | .94 | 1.70 | 112 | CEHJKR |
| CATA | 18 | 1140 E | 1200 D | S11 E27 | | 7727 | 1- | S | 1143 | 4.00 | | | | |
| WEND | 18 | 1206 E | 1254 D | N29 W26 | | 7718 | 1 | C | | 1.61 | 1.88 | 18 | 18 | |
| SACP | 18 | 1324 E | 1350 | N28 W28 | | 7718 | 1- | P | 1429 | 1.00 | 1.00 | | | E |
| MCMA | 18 | 1414 E | 1517 D | N28 W28 | | 7718 | 1- | P | 1813 | .18 | .26 | | | D |
| HUAN | 18 | 1811 E | 1816 | N29 W31 | | 7718 | 1- | C | | .92 | 1.10 | 17 | 17 | |
| SACP | 18 | 1915 | 1956 | N27 W32 | | 7718 | 1- | C | | | | | | |
| IKOM | 19 | 0006 | 0012 | N28 W36 | | 7718 | 1 | C | 0124 | .80 | 1.10 | 100 | 100 | E |
| IKOM | 19 | 0110 E | 0128 D | N28 W32 | | 7718 | 1- | V | 0941 | 1.40 | 2.25 | 80 | 80 | D |
| CATA | 19 | 0940 | 1000 D | N29 W36 | | 7718 | 1 | S | | | | 132 | 132 | |
| HALE | 20 | 0210 | 0233 | S12 E08 | | 7727 | 1- | 3 | 0219 | .50 | .50 | | | F |
| CAPS | 20 | 0755 E | 0800 D | N20 E75 | | 7732 | 1- | 1 | 0755 | .50 | 1.70 | 190 | 190 | DG |
| ARCE | 20 | 0820 E | 0850 D | N25 E80 | | 7732 | 1- | 2 | 0823 | .29 | .93 | | | |
| ARCE | 20 | 0910 E | 0923 D | N25 E80 | | 7732 | 1- | 2 | | .26 | .83 | | | |
| HALE | 20 | 1818 | 1820 | N31 W55 | | 7718 | 1- | 4 | 1819 | .10 | .20 | | | |
| SACP | 20 | 1818 | 1820 | N32 W54 | | 7718 | 1- | C | | .29 | .48 | 17 | 17 | |
| LOCK | 20 | 1856 | 1920 | S11 W01 | | 7727 | 1- | C | 1903 | .30 | .30 | 10 | 10 | |
| HALE | 20 | 1858 | 1917 | S13 W02 | | 7727 | 1- | 3 | 1907 | .40 | .40 | | | H |
| SACP | 20 | 1860 | 1924 U | S12 W02 | | 7727 | 1- | C | | .72 | .71 | 18 | 18 | |
| HALE | 20 | 2053 | 2113 | N27 W60 | | 7718 | 1- | 4 | 2100 | .30 | .50 | | | |
| LOCK | 21 | 2204 | 2224 | N28 W75 | | 7718 | 1- | C | 2211 | .30 | .90 | 10 | 10 | |
| CATA | 22 | 1013 E | 1200 D | N28 W90 | | 7718 | 1 | S | 1026 | .64 | 3.64 | 112 | 112 | |
| LOCK | 23 | 2310 E | 2320 D | N12 W90 | | | 1- | C | 2314 | .30 | 1.50 | 20 | 20 | |
| SACP | 24 | 1620 | 1650 D | N11 E73 | | 7735 | 1- | C | | .38 | .84 | 17 | 17 | |
| HUAN | 24 | 1623 | 1646 | N08 E74 | | 7735 | 1- | C | 1626 | .10 | .10 | | | D |
| OTTA | 24 | 1646 E | 1653 D | N17 E41 | | 7737 | 1- | C | 1650 | .16 | .19 | | | |
| KAND | 25 | 1229 | 1238 D | N11 E67 | | 7735 | 1- | C | | 2.07 | 3.23 | | | E |
| OTTA | 25 | 1246 | 1347 | N10 E62 | | 7735 | 1 | C | 1327 | | | 17 | 17 | |
| SACP | 25 | 1318 | 1341 | N09 E63 | | 7735 | 1- | C | | .86 | 1.42 | | | |
| HUAN | 25 | 1323 | 1343 | N08 E62 | | 7735 | 1- | C | 1328 | .25 | .55 | | | D |
| OTTA | 25 | 1350 | 1403 | N10 E62 | | 7735 | 1- | C | 1354 | .69 | 1.08 | | | |
| HUAN | 25 | 1352 | 1401 | N08 E62 | | 7735 | 1- | C | 1356 | .10 | .22 | | | D |
| SACP | 25 | 1606 | 1631 | N10 E58 | | 7735 | 1- | C | | .34 | .51 | 18 | 18 | |
| OTTA | 25 | 1608 | 1627 | N10 E58 | | 7735 | 1- | C | 1613 | .17 | .25 | | | HJ |
| HUAN | 25 | 1612 E | 1613 D | N08 E59 | | 7735 | 1- | P | | .18 | .36 | | | D |
| HUAN | 25 | 1621 E | 1634 | N08 E59 | | 7735 | 1- | P | 1625 | .30 | .60 | | | H |
| HUAN | 25 | 1638 | 1649 D | N09 E59 | | 7735 | 1- | P | 1642 | .42 | .84 | | | |
| HALE | 25 | 1811 E | 1833 | N09 E56 | | 7735 | 1- | 3 | 1813 | .40 | .60 | | | |
| LOCK | 25 | 2223 | 2250 | N09 W53 | | | 1- | C | 2235 | .40 | .60 | 10 | 10 | J |
| MANI | 26 | 0003 E | 0020 | N11 E58 | | 7735 | 1- | 1 | 0005 | .67 | .97 | | | |
| SACP | 26 | 0015 | 0048 | N09 E55 | | 7735 | 1- | P | | 1.44 | 2.02 | 28 | 28 | |
| MANI | 26 | 0508 E | 0549 | N11 E55 | | 7735 | 1 | 2 | 0513 | 1.60 | 2.24 | | | |
| ARCE | 26 | 0810 E | 0842 D | N13 E50 | | 7735 | 1 | 3 | 0817 | 1.93 | 2.97 | | | |

SOLAR FLARES

MARCH 1965

| OBSERVATORY | DATE | OBSERVED UNIVERSAL TIME | | LOCATION | | | DURA TION — MINUTES | IM- POR- TANCE | OBS. COND. | TIME — U T | MEASUREMENTS | | | REMARKS | |
|-------------|----------|-------------------------|----------|----------|-------------|--------------------------|------------------------------|----------------------|---------------|------------------|-------------------------|------------------------|--------------------------------|---------|------------------------------|
| | | START | END | APPROX | | MEATH FLAGE REGION | | | | | MEAS. AREA Sq Deg | CORR AREA Sq Deg | MAX WIDTH H ₀ | | MAX INT H ₀ |
| | | | | LAT | MER DIST | | | | | | | | | | |
| CAPS | MAR 1965 | | | | | | | | | | | | | | |
| | 26 | 0816 | 0829 | N08 E47 | 7735 | 13 | 1- | 3 | 0819 | 1.50 | 2.40 | 200 | EHJ | | |
| | 26 | 0816 | 0831 | N11 E54 | 7735 | | 1- | 2 | 0819 | .33 | .46 | | | | |
| | 26 | 0850 | 0913 | N11 E53 | 7735 | | 1- | 2 | 0858 | .33 | .44 | | | | |
| | 26 | 0855 | E 1000 D | N13 E50 | 7735 | | 1- | 2 | 0951 | 1.01 | 1.55 | | | | |
| | 26 | 0945 | E 1010 D | N10 E48 | 7735 | | 1- | 3 | 1000 | 1.00 | 1.50 | | | | |
| | 26 | 0949 | E 1005 D | N08 E46 | 7735 | | 1- | 3 | 1007 | .60 | 1.00 | 150 | CJ | | |
| | 26 | 1000 | E 1130 D | N10 E50 | 7735 | | 1- | 3 | 1007 | 1.02 | 1.64 | 151 | EFJ | | |
| | 26 | 1314 | E 1336 | N08 E45 | 7735 | 22 | 1- | 3 | 1324 | 1.67 | 2.03 | 216 | EFJ | | |
| | 26 | 1314 | E 1336 | N09 E45 | 7735 | | 1- | C | | .68 | .84 | 21 | | | |
| CAPS | 26 | 1429 | 1455 | N10 E46 | 7735 | | 1- | C | 1435 | .70 | 1.10 | 190 | EJ | | |
| | 26 | 1430 | 1444 | N08 E46 | 7735 | | 1- | C | 1541 | .16 | .25 | D | | | |
| | 26 | 1537 | 1547 | N09 E45 | 7735 | | 1- | C | 1541 | .16 | .25 | 19 | | | |
| | 26 | 2036 | 2058 | N11 E42 | 7735 | | 1- | C | | .76 | .90 | | | | |
| OTTA | 27 | 1220 | 1421 | N12 E34 | 7735 | 121 | 1 | C | 1229 | 1.10 | 2.13 | 190 | EF | | |
| | 27 | 1227 | E 1310 | N09 E38 | 7735 | 43 D | 1 | 3 | 1231 | 1.90 | 2.50 | CE | | | |
| | 27 | 1302 | E 1345 D | N12 E38 | 7735 | | 1- | 2 | 1308 | .40 | .50 | E | | | |
| OTTA | 28 | 1526 | 1552 | N24 E90 | | | 1- | C | 1539 | .29 | | | | | |
| | 28 | 1844 | 1853 | N12 E20 | 7735 | | 1- | 2 | 1845 | .20 | .20 | D | | | |
| | 28 | 2232 | 2245 | N18 W32 | | | 1- | C | 2236 | .40 | .40 | 10 | | | |
| | 29 | 0040 | 0058 | N01 W66 | 7736 | | 1- | C | | .60 | 1.02 | 18 | | | |
| OTTA | 30 | 1541 | 1549 | N09 E67 | | | 1- | C | 1545 | .11 | .21 | | | | |
| | 30 | 1703 | 1710 | N15 E23 | | | 1- | C | 1707 | .15 | .15 | H | | | |
| | 30 | 2247 | 2304 D | N12 W17 | 7735 | | 1- | C | | .34 | .34 | 17 | | | |

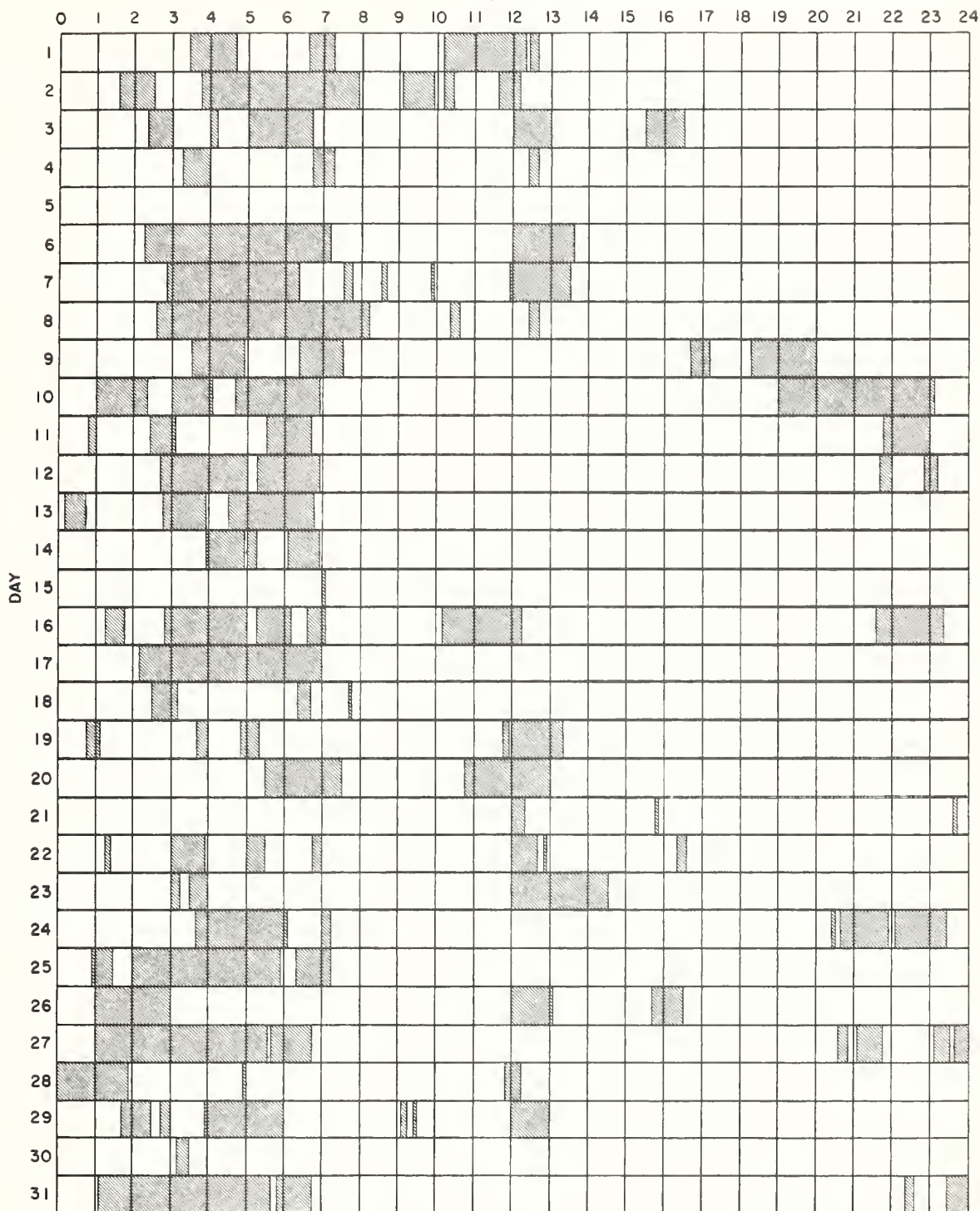
COMMERCE - STANDARDS - BOULDER

INTERVALS OF NO FLARE PATROL OBSERVATIONS PROVISIONAL

IIIc

MARCH 1965

HOURLY-UT



Observatories included:

Arcetri
Arosa
Bucharest
Catania

Haleakala
Herstmonceux
Ikomasan
Istanbul

Kandilli
Kanzelhöhe
Locarno
Lockheed

Manila
McMath-Hulbert
Ondrejov
Ottawa

Sacramento Peak
Salonique
Tortosa
Wendelstein

Zürich

SOLAR FLARES

NOVEMBER 1964

| OBSERVATORY | DATE | OBSERVED UNIVERSAL TIME | | | LOCATION | | | DURA- TION — MINUTES | IM- POR- TANCE | OBS COND. | TIME — U T | MEASUREMENTS | | | REMARKS |
|--------------|----------|----------------------------|----------|--------------|----------------|-------------|---------------------------|-------------------------------|----------------------|--------------|------------------|--------------------------|--------------------------|--------------------|---------|
| | | START | END | MAX PHASE | APPROX LAT. | MER DIST | MEMATH PLACE REGION | | | | | MEAS AREA Sq. Deg. | CORR AREA Sq. Deg. | MAX WIDTH Ha | |
| CLMX MCMA | NOV 1964 | | | | | | | | | | | | | | |
| | 01 | 0215 | 0235 | NO FLARE | PATROL | | | | | | | | | | |
| | 01 | 0330 | 0500 | NO FLARE | PATROL | | | | | | | | | | |
| | 01 | 1702 | 1708 | 1704 | N28 W21 | | 7538 | | 1- | C | 1704 | .60 | 1.00 | | SL |
| | 01 | 1703 | 1708 | 1704 | N29 W19 | | 7538 | | 1- | 1 C | 1704 | .60 | .70 | | |
| | 03 | 0137 E | 0148 | 0139 | N29 W38 | | 7538 | | 1- | P | 0139 | 1.20 | 1.70 | | GH |
| | 03 | 1230 | 1235 | NO FLARE | PATROL | | | | | | | | | | |
| | 03 | 1245 | 1250 | NO FLARE | PATROL | | | | | | | | | | |
| SACP | 03 | 1300 | 1310 | NO FLARE | PATROL | | | | | | | | | | |
| | 03 | 1629 | 1650 | 1640 | S12 W53 | | 7548 | | 1- | C | | .41 | .55 | | 16 |
| | 04 | 0400 | 0430 | NO FLARE | PATROL | | | | | | | | | | |
| | 05 | 0310 | 0330 | NO FLARE | PATROL | | | | | | | | | | |
| ARCE | 05 | 0355 | 0450 | NO FLARE | PATROL | | | | | | | | | | |
| | 05 | 0830 E | 0912 D | NO FLARE | N35 E70 | | 7562 | | 1- | 2 | 0838 | .38 | 1.01 | | |
| | 05 | 1100 | 1115 | NO FLARE | PATROL | | | | | | | | | | |
| | 05 | 1320 | 1325 | NO FLARE | PATROL | | | | | | | | | | |
| UCCL | 05 | 1345 | 1355 | NO FLARE | PATROL | | | | | | | | | | |
| | 06 | 0020 | 0105 | NO FLARE | PATROL | | | | | | | | | | |
| | 06 | 0155 | 0205 | NO FLARE | PATROL | | | | | | | | | | |
| | 06 | 0325 | 0410 | NO FLARE | PATROL | | | | | | | | | | |
| | 06 | 0505 | 0555 | NO FLARE | PATROL | | | | | | | | | | |
| | 06 | 0640 | 0700 | NO FLARE | PATROL | | | | | | | | | | |
| | 06 | 1122 | 1126 | NO FLARE | N33 E59 | | 7562 | | 1- | 3 | | | | | E |
| | 07 | 0225 | 0300 | NO FLARE | PATROL | | | | | | | | | | |
| 07 | 0900 | 0920 | NO FLARE | PATROL | | | | | | | | | | | |
| SYDN | 08 | 0910 | 0915 | NO FLARE | PATROL | | | | | | | | | | |
| | 08 | 0930 | 0935 | NO FLARE | PATROL | | | | | | | | | | |
| | 08 | 1355 | 1415 | NO FLARE | PATROL | | | | | | | | | | |
| | 08 | 1540 | 1545 | NO FLARE | PATROL | | | | | | | | | | |
| | 08 | 2134 | 2146 | 2139 | S30 W09 | | | | 1- | C | 2139 | .60 | .72 | | CG |
| | 09 | 0650 | 0700 | NO FLARE | PATROL | | | | | | | | | | |
| | 09 | 0937 | 0945 | NO FLARE | N33 E17 | | 7562 | | 1- | 2 | | | | | E |
| | 09 | 1027 | 1032 | NO FLARE | N33 E17 | | 7562 | | 1- | 2 | | | | | E |
| 09 | 1246 | 1251 | NO FLARE | N33 E17 | | 7562 | | 1- | 2 | | | | | E | |
| UCCL | 09 | 1435 | 1550 | NO FLARE | PATROL | | | | | | | | | | |
| | 09 | 1715 | 1840 | NO FLARE | PATROL | | | | | | | | | | |
| | 09 | 1850 | 1920 | NO FLARE | PATROL | | | | | | | | | | |
| | 09 | 1950 | 2000 | NO FLARE | PATROL | | | | | | | | | | |
| | 09 | 2125 | 2150 | NO FLARE | PATROL | | | | | | | | | | |
| | 10 | 0340 | 0345 | NO FLARE | PATROL | | | | | | | | | | |
| | 10 | 0355 | 0400 | NO FLARE | PATROL | | | | | | | | | | |
| | 10 | 1014 | 1027 | NO FLARE | N33 E03 | | 7562 | | 1- | 2 | | | | | DK |
| 10 | 1415 | 1445 | NO FLARE | PATROL | | | | | | | | | | | |
| 10 | 1620 | 1630 | NO FLARE | PATROL | | | | | | | | | | | |

SOLAR FLARES

NOVEMBER 1964

| OBSERVATORY | DATE | OBSERVED UNIVERSAL TIME | | LOCATION | | | DURA- TION MINUTES | IM- POR- TANCE | OBS. COND. | TIME UT | MEASUREMENTS | | | REMARKS |
|-------------|----------|-------------------------|--------|----------|---------|-------|--------------------------|----------------------|---------------|------------|-------------------------|-------------------------|--------------------------------|---------|
| | | START | END | APPROX. | LAT. | LONG. | | | | | MEAS. AREA Sq Deg | COVR. AREA Sq Deg | MAX WIDTH H ₀ | |
| | NOV 1964 | | | | | | | | | | | | | |
| | 10 | 1800 | 1820 | NO FLARE | PATROL | | | | | | | | | |
| | 10 | 1825 | 1855 | NO FLARE | PATROL | | | | | | | | | |
| | 10 | 1905 | 1910 | NO FLARE | PATROL | | | | | | | | | |
| | 10 | 2005 | 2110 | NO FLARE | PATROL | | | | | | | | | |
| | 10 | 2130 | 2200 | NO FLARE | PATROL | | | | | | | | | |
| | 10 | 2215 | 2235 | NO FLARE | PATROL | | | | | | | | | |
| | 11 | 1200 | 1335 | NO FLARE | PATROL | | | | | | | | | |
| | 11 | 1608 | 1622 | 1615 | N30 E11 | 7568 | | 1- | 2 C | 1615 | .30 | .30 | | EH |
| | 11 | 1950 | 2135 | NO FLARE | PATROL | | | | | | | | | |
| | 11 | 2355 | 2400 | NO FLARE | PATROL | | | | | | | | | |
| | 12 | 0000 | 0035 | NO FLARE | PATROL | | | | | | | | | |
| | 12 | 0445 | 0500 | NO FLARE | PATROL | | | | | | | | | |
| | 12 | 0940 | 1008 D | | N29 E02 | 7568 | | 1- | 2 S | 0958 | 1.50 | 1.60 | | DFGHJ |
| | 12 | 0945 E | 1150 D | | N30 E03 | 7568 | | 1- | 3 | 1420 | .77 | .88 | | |
| | 12 | 1420 | | | N29 W01 | 7568 | | | | | | | | |
| | 13 | 0050 | 0055 | NO FLARE | PATROL | | | | | | | | | |
| | 13 | 0135 | 0225 | NO FLARE | PATROL | | | | | | | | | |
| | 13 | 0245 | 0350 | NO FLARE | PATROL | | | | | | | | | |
| | 13 | 0400 | 0410 | NO FLARE | PATROL | | | | | | | | | |
| | 13 | 2100 | 2122 | 2104 | N32 W18 | 7568 | | 1- | C | 2104 | .30 | .30 | | J |
| | 13 | 2204 | 2214 | 2210 | N32 W18 | 7568 | | 1- | C | 2210 | .20 | .20 | | J |
| | 14 | 0039 | 0058 | 0046 | N34 W21 | 7568 | | 1- | C | 0046 | .40 | .48 | | DG |
| | 14 | 0042 E | 0055 | 0047 | N32 W20 | 7568 | | 1- | C | | | | | D |
| | 14 | 0820 E | | | N30 W25 | 7568 | | 1- | S | | | | | |
| | 14 | 0920 | | | N30 W27 | 7568 | | 1- | 2 | 0920 | .56 | .70 | | |
| | 15 | 0404 | 0417 | 0410 | N32 W39 | 7568 | | 1- | C | 0410 | .30 | .42 | | GH |
| | 15 | 0853 E | 0857 D | 0853 | N30 W38 | 7568 | | 1- | 3 | 0853 | | | 2.20 | D |
| | 15 | 1104 | 1107 D | | N32 W44 | 7568 | | 1- | C | 1641 | .20 | .20 | | 10 |
| | 15 | 1638 | 1647 | 1641 | N32 W38 | 7568 | | 1- | | | | | | |
| | 16 | 0250 | 0258 | 0254 | N31 W53 | 7568 | | 1- | C | 0254 | .40 | .72 | | DGH |
| | 16 | 0251 | 0255 | 0253 | N32 W52 | 7568 | | 1- | C | | | | | H |
| | 16 | 1430 | 1445 | NO FLARE | PATROL | | | | | | | | | |
| | 16 | 1500 | 1530 | NO FLARE | PATROL | | | | | | | | | |
| | 16 | 1535 | 1540 | NO FLARE | PATROL | | | | | | | | | |
| | 16 | 1600 | 2055 | NO FLARE | PATROL | | | | | | | | | |
| | 16 | 1729 E | 1733 D | 1730 | N20 W12 | 7581 | | 1- | P | | .27 | .27 | | 18 |
| | 16 | 2100 E | 2101 U | 2100 E | N19 W13 | 7581 | | 1- | P | | 1.92 | 1.81 | | 18 |
| | 16 | 2122 | 2127 D | 2125 | N19 W16 | 7581 | | 1- | P | | .27 | .27 | | 19 |
| | 16 | 2255 | 2308 D | 2308 | N20 W17 | 7581 | | 1- | P | | .35 | .35 | | 19 |
| | 16 | 2305 | 2315 D | 2315 D | N18 W15 | 7581 | | 1- | | 2310 | 3.60 | 3.90 | | E |
| | 16 | 2338 E | 2351 D | | N18 W16 | 7581 | | 1- | | 2338 | 1.80 | 1.90 | | D |
| | 16 | 2349 E | 0034 | 0006 | N18 W14 | 7581 | | 1- | V | 0006 | 2.46 | 2.68 | | LE |
| | 16 | 2353 | 0035 | 0014 | N22 W17 | 7581 | | 1- | C | 0014 | .60 | .66 | | L |
| | 17 | 0015 E | 0040 D | | N18 W15 | 7581 | | 1 | | 0018 | 3.20 | 3.50 | | E |

SOLAR FLARES

NOVEMBER 1964

| OBSERVATORY | DATE | OBSERVED UNIVERSAL TIME | | LOCATION | | | DURA- TION — MINUTES | IM- POR- TANCE | OBS. COND. | MEASUREMENTS | | | | REMARKS | | |
|--|----------|-------------------------|--------|--------------|---------|-------------|-------------------------------|----------------------|---------------|--------------------------|-------------|------------------------|------------------------|---------|--------------------------------|-----------------|
| | | START | END | MAX PHASE | APPROX. | | | | | MONTH PLACE REGION | TIME U T | MEAS AREA Sq Deg | CORR AREA Sq Deg | | MAX WIDTH H ₀ | MAX INT ° |
| | | | | | LAT | MER DIST | | | | | | | | | | |
| VORO IKOM MITK SYDN CATA SACP SACP SACP SYDN | NOV 1964 | | | | | | | | | | | | | | | |
| | 17 | 0105 E | 0224 D | N18 W18 | | 7581 | | 1- | C | 0113 | 1.35 | 1.43 | | 30 | EH | |
| | 17 | 0110 E | 0135 D | N18 W15 | | 7581 | 25 D | 1 | | | | | | 100 | E | |
| | 17 | 0343 | 0350 D | N18 W16 | | 7581 | | 1- | | | | | | 80 | D | |
| | 17 | 0345 E | 0354 | N20 W18 | | 7581 | 9 D | 1 | V | 0345 | .98 | 1.08 | 1.64 | 96 | E | |
| | 17 | 0527 SYDN | 0604 | N17 E64 | | 7582 | 37 | 2 | S | 0542 | 4.00 | 9.00 | | | GJ | |
| | 17 | 0851 E | | N18 W24 | | 7581 | | 1- | | | | | | 17 | | |
| | 17 | 1724 | 1746 | S10 W58 | | 7579 | | 1- | C | | .21 | .31 | | | | |
| | 17 | 1750 | 1800 | N18 W26 | | 7581 | | 1- | C | | .41 | .43 | | 17 | | |
| | 17 | 2208 | 2229 | N20 W31 | | 7581 | | 1- | C | | .41 | .43 | | 16 | | |
| TACH SACP MITK MITK LOCK LOCK LOCK LOCK | 17 | 2224 | 2235 | N19 W28 | | 7581 | | 1- | C | | .55 | .58 | | 19 | | |
| | 17 | 2224 | 2235 | N20 W28 | | 7581 | | 1- | C | 2226 | 1.40 | 1.61 | | | H | |
| | 18 | 0727 | 0753 | N17 E49 | | 7582 | 26 | 1 | C | 0739 | 2.10 | 3.20 | | 55 | E | |
| | 18 | 1507 | 1516 | N19 W36 | | 7581 | | 1- | C | | .25 | .27 | | 17 | | |
| | 20 | 0223 | 0317 | N37 W45 | | 7587 | | 1- | C | | | | | | DG | |
| | 21 | 0334 | 0347 | N21 W75 | | 7581 | 13 | 1 | C | | | | | | | |
| | 21 | 2128 | 2134 | N17 W85 | | 7581 | | 1- | C | 2130 | .20 | .60 | | 10 | H | |
| | 21 | 2339 | 2357 | N26 E62 | | 7592 | | 1- | C | 2344 | .20 | .30 | | 10 | J | |
| | 22 | 0700 | 0745 | PATROL | | | | | | | | | | | | |
| | 22 | 1830 | 1930 | N37 W80 | | 7587 | | 1- | C | 1845 | .40 | 1.00 | | 10 | J | |
| MITK SYDN SYDN MITK LOCK LOCK LOCK LOCK | 22 | 2235 | 2250 | N37 W80 | | 7587 | | 1- | C | 2239 | .20 | .50 | | 10 | J | |
| | 22 | 2302 | 2327 | N37 W80 | | 7587 | | 1- | C | 2310 | .20 | .60 | | 10 | | |
| | 22 | 2333 | 0030 | N37 W85 | | 7587 | 57 | 1 | C | 2400 | 1.60 | 4.80 | | 20 | L | |
| | 23 | 0003 | 0028 | N37 W84 | | 7587 | 25 | 1 | C | | | | 4.95 | | G | |
| | 23 | 0012 | 0019 | N38 W90 | | 7587 | | | C | | | | | | G | |
| | 23 | 0408 | 0427 | N36 W90 | | 7587 | 15 | 1 | C | | | | 3.65 | | G | |
| | 23 | 0411 | 0426 | N37 W86 | | 7587 | | | C | | | | | | G | |
| | 24 | 0620 | 0640 | PATROL | | | | | | | | | | | | |
| | 24 | 1728 | 1745 | N28 E28 | | 7592 | | 1- | C | 1733 | .30 | .30 | | 10 | L | |
| | 24 | 2341 | 0030 | N29 E26 | | 7592 | 49 | 1 | C | 2350 | 2.00 | 2.00 | | 20 | L | |
| SYDN SACP LOCK LOCK LOCK LOCK SACP SACP SACP SACP | 24 | 2343 | 0004 | N27 E25 | | 7592 | 21 | 2 | C | 2351 | 7.00 | 8.40 | | | GHJ | |
| | 24 | 2343 | 2355 D | N28 E26 | | 7592 | | 1- | C | | 1.40 | 1.50 | | 19 | | |
| | 25 | 1655 | 1709 | N29 E15 | | 7592 | | 1- | C | 1658 | .20 | .20 | | 10 | | |
| | 25 | 2150 | 2201 | S11 W28 | | 7585 | | 1- | C | 2155 | .30 | .30 | | 10 | | |
| | 25 | 2217 | 2232 | N25 E09 | | 7592 | | 1- | C | 2221 | .30 | .30 | | 10 | | |
| | 26 | 1210 | 1220 | PATROL | | | | | | | | | | | | |
| | 26 | 1235 | 1255 | NO FLARE | | | | | | | | | | | | |
| | 26 | 1305 | 1325 | NO FLARE | | | | | | | | | | | | |
| | 26 | 1335 | 1350 | NO FLARE | | | | | | | | | | | | |
| | 26 | 1616 | 1704 | N27 E03 | | 7592 | | 1- | C | | .82 | .84 | | 19 | | |
| HUAN SACP | 26 | 1935 | 1950 | NO FLARE | | | | | | | | | | | | |
| | 27 | 1313 E | 1328 | N28 W10 | | 7592 | | 1- | P | 1314 | .31 | .35 | | 16 | E | |
| | 27 | 2140 | 2200 | N26 W13 | | 7592 | | 1- | C | | .31 | .31 | | | | |

SOLAR FLARES

NOVEMBER 1964

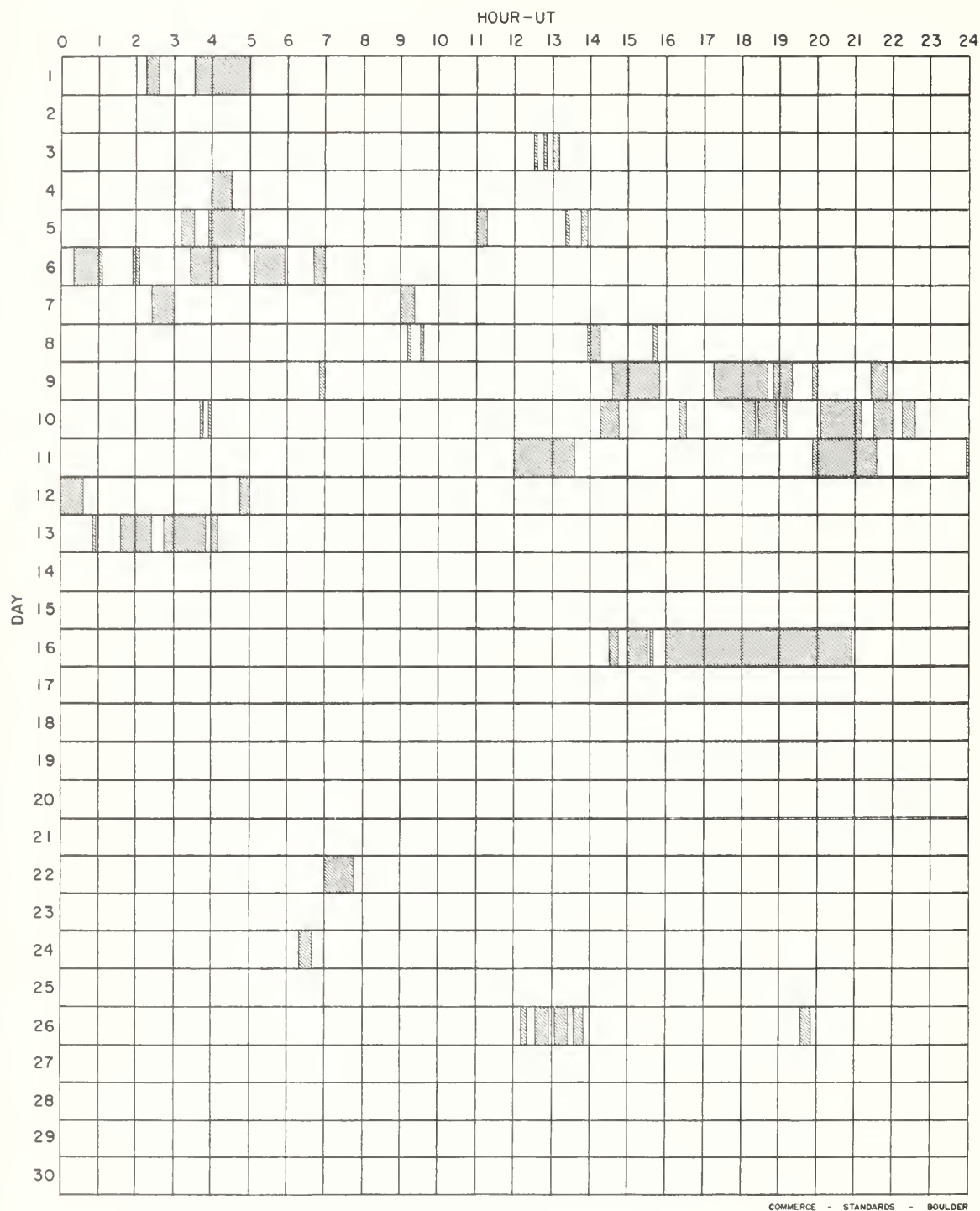
| OBSERVATORY | DATE | OBSERVED UNIVERSAL TIME | | LOCATION | | | DURA- TION — MINUTES | IM- POR- TANCE | OBS. COND. | MEASUREMENTS | | MAX WIDTH H ₀ | MAX INT ° | REMARKS |
|-------------|--------|-------------------------|--------|---------------|-------------|----------------------------|-------------------------------|----------------------|---------------|-------------------------|------------------------|--------------------------------|-----------------|---------|
| | | START | END | APPROX LAT | MER DIST | MC-MATH FLAGE REGION | | | | MEAS. AREA Sq Deg | CORR AREA Sq Deg | | | |
| SACP | NOV 27 | 2248 | 2300 | N27 | W16 | 7592 | | 1- | C | .43 | .45 | | 18 | |
| SACP | 27 | 2303 | 2316 D | N30 | W17 | 7592 | | 1- | P | .54 | .56 | | 17 | |
| UCCL | 28 | 1121 | 1125 | N18 | W50 | 7596 | | 1- | 3 | | | | | DH |
| CAPE | 28 | 1315 | 1338 | N28 | W26 | 7592 | | 1- | | .80 | 1.00 | | | H |
| SACP | 28 | 1357 | 1424 | N28 | W25 | 7592 | | 1- | C | .21 | .23 | | 18 | |
| LOCK | 28 | 1634 | 1655 | N28 | W28 | 7592 | | 1- | C | .30 | .30 | | 10 | H |
| LOCK | 28 | 1820 | 1830 | N28 | W28 | 7592 | | 1- | C | .20 | .20 | | 10 | H |
| LOCK | 28 | 2120 | 2155 | S11 | W90 | 7585 | | 1- | C | .20 | 1.00 | | 10 | |
| LOCK | 29 | 1602 E | 1618 | N07 | E70 | 7602 | | 1- | C | .50 | 1.00 | | 10 | |
| LOCK | 29 | 1637 | 1645 | N30 | W13 | 7600 | | 1- | C | .30 | .30 | | 10 | L |
| LOCK | 29 | 1827 | 1850 | N33 | E05 | 7601 | | 1- | C | .30 | .30 | | 10 | L |
| HUAN | 30 | 1716 E | 1743 | N18 | W82 | 7596 | | 1- | P | .25 | | | | CG |

COMMERCE - STANDARDS - BOULDER

These flares are addenda to the November 1964 flares published in CRPL-F 244 for December 1964.

INTERVALS OF NO FLARE PATROL OBSERVATIONS

NOVEMBER 1964



Observatories included:

| | | | | | |
|------------|------------------|--------------|------------|-----------------|------------|
| Abastumani | Capri-F (German) | Herstmonceux | Kiev-Ko | McMath-Hulbert | Siberie |
| Arcetri | Capri-S (Sweden) | Huancayo | Kodaikanal | Mitaka | Sydney |
| Athenes | Catania | Ikomasan | Locarno | Nizamiah | Tachkent |
| Bakou | Climax | Istanbul | Lockheed | Ondrejov | Tortosa |
| Bucharest | Crimee | Izmiran | Lvov | Sacramento Peak | Uccle |
| Capetown | Haute-Provence | Kanzelhöhe | Manila | Salonique | Voroshilov |
| | | | | | Zürich |

SOLAR FLARES

DECEMBER 1964

| OBSERVATORY | DATE | OBSERVED UNIVERSAL TIME | | LOCATION | | DURA TION — MINUTES | IM- POR- TANCE | OBS COND. | TIME U T | MEASUREMENTS | | | MAX WIDTH Ha | MAX INT % | REMARKS | |
|--|----------|-------------------------|------|----------------|-----------------------|------------------------------|----------------------|--------------|-------------|----------------------------|------------------------|------------------------|--------------------|-----------------|---------|--|
| | | START | END | APPROX LAT. | APPROX MER DIST | | | | | MEMPHIS PLACE REGION | MEAS AREA Sq Deg | CORR AREA Sq Deg | | | | |
| CAPS SACP | DEC 1964 | | | | | | | | | | | | | | | |
| | 01 | 0005 | 0015 | NO FLARE | PATROL | | | | | | | | | | | |
| | 01 | 0205 | 0225 | NO FLARE | PATROL | | | | | | | | | | | |
| | 01 | 1055 | 1111 | D | N23 W66 | 7592 | | | | | | | | | | |
| | 01 | 1426 | 1447 | | N26 W66 | 7592 | | | | | | | | | | |
| | 01 | 1550 | 1605 | NO FLARE | PATROL | | | | | | | | | | | |
| | 01 | 2120 | 2155 | NO FLARE | PATROL | | | | | | | | | | | |
| | 01 | 2210 | 2215 | NO FLARE | PATROL | | | | | | | | | | | |
| | 01 | 2315 | 2335 | NO FLARE | PATROL | | | | | | | | | | | |
| | 01 | 2350 | 2400 | NO FLARE | PATROL | | | | | | | | | | | |
| SYDN MANI CAPS ABST LOCA ARCE KANZ CAPS ARCE | 02 | 1925 | 1950 | NO FLARE | PATROL | | | | | | | | | | | |
| | 02 | 2005 | 2010 | NO FLARE | PATROL | | | | | | | | | | | |
| | 02 | 2020 | 2045 | NO FLARE | PATROL | | | | | | | | | | | |
| | 02 | 2150 | 2155 | NO FLARE | PATROL | | | | | | | | | | | |
| | 03 | 1405 | 1440 | NO FLARE | PATROL | | | | | | | | | | | |
| | 03 | 1520 | 1635 | NO FLARE | PATROL | | | | | | | | | | | |
| | 03 | 1650 | 1705 | NO FLARE | PATROL | | | | | | | | | | | |
| | 03 | 1710 | 1900 | NO FLARE | PATROL | | | | | | | | | | | |
| | 03 | 1910 | 1915 | NO FLARE | PATROL | | | | | | | | | | | |
| | 03 | 1930 | 2115 | NO FLARE | PATROL | | | | | | | | | | | |
| SYDN HUAN SYDN | 04 | 0032 | 0049 | U037 | N36 E63 | 7606 | | | | | | | | | | |
| | 04 | 0753 | 0810 | U757 | N30 E84 | 7606 | | | | | | | | | | |
| | 04 | 0827 | 0856 | D | N38 E80 | 7606 | 29 | | | | | | | | | |
| | 04 | 0829 | 0855 | D | N32 E85 | 7606 | 26 D | | | | | | | | | |
| | 04 | 0840 | 1000 | D | N28 E80 | 7606 | 80 D | | | | | | | | | |
| | 04 | 0935 | 0955 | D | N33 E80 | 7606 | 20 D | | | | | | | | | |
| | 04 | 0958 | 1003 | D | N29 E72 | 7606 | | | | | | | | | | |
| | 04 | 0958 | 1015 | D | N32 E80 | 7606 | | | | | | | | | | |
| | 04 | 1000 | 1505 | NO FLARE | N34 E80 | 7606 | | | | | | | | | | |
| | 04 | 1500 | 1505 | NO FLARE | PATROL | | | | | | | | | | | |
| SYDN SYDN LOCK LOCK LOCK LOCK | 04 | 1536 | 1548 | 1541 | N29 E78 | 7606 | 22 | | | | | | | | | |
| | 04 | 2312 | 2334 | 2315 | N31 E74 | 7606 | | | | | | | | | | |
| | 05 | 0112 | 0124 | D | N32 E74 | 7606 | | | | | | | | | | |
| | 05 | 0456 | 0502 | U457 | N29 E67 | 7606 | | | | | | | | | | |
| | 05 | 1740 | 1800 | 1747 | N30 E33 | 7606 | | | | | | | | | | |
| | 05 | 2003 | 2024 | 2010 | N24 W26 | 7606 | | | | | | | | | | |
| | 05 | 2054 | 2107 | 2059 | N48 E12 | 7606 | | | | | | | | | | |
| | 05 | 2130 | 2149 | 2140 | N32 E30 | 7606 | | | | | | | | | | |
| | 06 | 0320 | 0325 | NO FLARE | PATROL | | | | | | | | | | | |
| | 06 | 0515 | 0520 | NO FLARE | PATROL | | | | | | | | | | | |
| CATA CAPS KANZ CAPS SYDN | 07 | 0400 | 0410 | NO FLARE | PATROL | | | | | | | | | | | |
| | 07 | 1008 | 1025 | D | N32 E45 | 7606 | 17 D | | | | | | | | | |
| | 07 | 1017 | 1038 | D | N34 E46 | 7606 | 21 D | | | | | | | | | |
| | 07 | 1018 | 1042 | D | N33 E47 | 7606 | 24 D | | | | | | | | | |
| | 07 | 1019 | 1022 | D | N22 E75 | 7611 | | | | | | | | | | |
| | 07 | 2344 | 0011 | 2357 | N23 E03 | 7605 | | | | | | | | | | |

SOLAR FLARES

DECEMBER 1964

| OBSERVATORY | DATE | OBSERVED UNIVERSAL TIME | | LOCATION | | | DURA TION — MINUTES | IM. POR- TANCE | OBS. COND. | TIME — U.T. | MEASUREMENTS | | | MAX WIDTH Hr | MAX INT | REMARKS |
|-------------|-------------|-------------------------|----------|----------|---------|--------------|------------------------------|----------------------|---------------|-------------------|-----------------|------|--|--------------------|------------|---------|
| | | START | END | APPROX. | M-MATH | | | | | | | | | | | |
| | | | | | LAT. | MER DIST. | | | | | FLARE REGION | | | | | |
| LOCK | DEC 08 1964 | 1828 | 1842 | 1835 | N47 W28 | | | 1- | C | 1835 | .30 | .40 | | 10 | | |
| | 09 0630 | 0650 | NO FLARE | PATROL | | | | | | | | | | | | |
| | 09 0705 | 0725 | NO FLARE | PATROL | | | | | | | | | | | | |
| | 09 1510 E | 1514 D | | S05 E90 | 7613 | | 4 D | 1 | 2 | 1514 | .70 | 3.98 | | | O | |
| | 09 1742 | 1830 | 1752 | S06 E80 | 7613 | | | 1- | C | 1752 | .50 | 1.50 | | 10 | HJ | |
| | 09 1940 | 2030 | 2000 | S06 E90 | 7613 | | 50 | 1 | C | 2000 | .50 | 2.50 | | 10 | HJ | |
| | 09 2115 | 2210 | 2135 | S06 E80 | 7613 | | 55 | 1 | C | 2135 | .70 | 2.10 | | 10 | J | |
| | 09 2214 | 2222 | 2217 | S07 E90 | 7613 | | 8 | 1 | C | 2217 | .50 | 2.50 | | 10 | J | |
| | 09 2252 | 2310 | 2257 | S06 E80 | 7613 | | | 1- | C | 2257 | .30 | .30 | | 10 | | |
| | 10 0525 | 0540 | NO FLARE | PATROL | | | | | | | | | | | | |
| ARCE | 10 0945 E | 1000 D | | S06 E79 | 7613 | | | 1- | 2 | 1000 | .33 | 1.01 | | | O | |
| | 10 1033 | 1034 | | S27 W80 | | | | 1- | 3 | | | | | | D | |
| | 10 1120 | 1138 | | S03 E78 | 7613 | | 18 | 1 | 3 | 1127 | 1.80 | | | 166 | | |
| | 10 1152 E | 1203 | | S03 E78 | 7613 | | | 1- | 3 | 1158 | 1.50 | | | 150 | | |
| | 10 1227 E | 1234 | | S03 E75 | 7613 | | | 1- | 3 | 1228 | .30 | | | 142 | DGH | |
| | 10 1353 | 1400 | | N30 E05 | 7606 | | | 1- | 3 | 1357 | .20 | .20 | | 148 | DGH | |
| | 10 2030 | 2245 | 2125 | N32 W29 | 7605 | | | 1- | C | 2125 | 1.00 | 1.10 | | 10 | L | |
| | 10 2332 | 2355 D | 2344 | N38 W60 | | | | 1- | C | | .67 | 1.13 | | 16 | | |
| | 11 0925 E | 0955 D | | S11 E69 | 7613 | | | 1- | | 0932 | | | | | | |
| | 11 1110 E | 1147 D | | S08 E69 | 7613 | | | 1- | | 1128 | | | | | | |
| CAPE | 12 0720 | 0733 | 0726 | S09 E58 | 7613 | | | 1- | C | 0726 | 1.10 | 2.10 | | 17 | | |
| | 12 0850 E | 1210 D | | S08 E65 | 7613 | | | 1- | C | 0855 | .74 | .89 | | | | |
| | 12 1425 | 1430 | 1427 | S05 E43 | 7613 | | | 1- | | | | | | | | |
| | 13 0448 | 0504 | 0453 | S05 E40 | 7613 | | | 1- | C | 0453 | .80 | 1.04 | | 149 | J | |
| | 13 0915 E | 0926 | | N27 W32 | 7606 | | | 1- | 3 | 0919 | .20 | .30 | | 154 | DG | |
| CAPS | 13 1224 | 1247 | | N22 W12 | 7614 | | | 1- | 3 | 1238 | 1.00 | 1.10 | | 18 | | |
| | 13 1850 | 1907 | 1856 | S08 E27 | 7613 | | | 1- | C | | .68 | .74 | | | | |
| | 14 1835 | 1859 | 1848 | N33 W52 | 7606 | | | 1- | C | 1848 | .30 | .40 | | 10 | L | |
| | 15 0020 | 0125 | NO FLARE | PATROL | | | | | | | | | | | | |
| | 15 0700 | 0755 | NO FLARE | PATROL | | | | 1- | C | 2150 | .20 | .40 | | 10 | | |
| LOCK | 15 2125 | 2230 | 2150 | S51 E48 | | | | | | | | | | | | |
| | 16 1915 | 2020 | NO FLARE | PATROL | | | | | | | | | | | | |
| | 16 2025 | 2055 | NO FLARE | PATROL | | | | | | | | | | | | |
| | 16 2100 | 2115 | NO FLARE | PATROL | | | | | | | | | | | | |
| | 16 2225 | 2400 | NO FLARE | PATROL | | | | | | | | | | | | |
| CAPS | 17 0000 | 0225 | NO FLARE | PATROL | | | | 1- | 1 | 1330 | 2.00 | 3.50 | | 157 | | |
| | 17 1310 E | 1421 D | | S08 E56 | 7619 | | | | | | | | | | | |
| | 17 1430 | NO FLARE | PATROL | | | | | | | | | | | | | |
| | 17 1500 | NO FLARE | PATROL | | | | | | | | | | | | | |
| | 17 1732 | 1740 | 1735 | S09 E54 | 7619 | | | 1- | 1 C | 1735 | .40 | .70 | | 20 | D | |
| MCMA | 17 1732 | 1740 | 1735 | S09 E54 | 7619 | | | 1- | 1 C | 1735 | .40 | .70 | | 20 | D | |
| | 17 2315 | 2340 D | 2326 | N23 E12 | 7618 | | | 1- | C | 2326 | .60 | .60 | | | | |

SOLAR FLARES

DECEMBER 1964

| OBSERVATORY | DATE | OBSERVED UNIVERSAL TIME | | LOCATION | | | DURA TION — MINUTES | IM- POR- TANCE | OBS COND. | MEASUREMENTS | | | | REMARKS | |
|---|-------------|-------------------------|----------|---------------|-----------------------|----------------------------|------------------------------|----------------------|--------------|------------------|------------------------|------------------------|--------------------------------|---------|------------------|
| | | START | END | APPROX LAT | APPROX MER DIST | M:PLATH PLAGE REGION | | | | TIME — U T | MEAS AREA Sq Deg | CORR AREA Sq Deg | MAX WIDTH H _g | | MAX INT. % |
| MITK MITK MITK | DEC 18 1964 | 18 0700 | 0705 | NO FLARE | PATROL | | | | | | | | | | |
| | 18 1900 | 2320 | | NO FLARE | PATROL | | | | | | | | | | |
| | 19 0146 | 0214 | | 0149 | S10 W35 | 7613 | | 1- | C | | | | | | G |
| | 19 0241 | 0248 | | 0243 | N06 W38 | 7624 | | 1- | C | | | | | | DG |
| | 19 0527 | 0617 | D | 0534 | N06 W38 | 7624 | | 1- | C | | | | | | G |
| | 19 0915 | 0935 | | NO FLARE | PATROL | | | | | | | | | | |
| | 19 1420 | 1445 | | NO FLARE | PATROL | | | | | | | | | | |
| | 19 1830 | 1845 | | NO FLARE | PATROL | | | | | | | | | | |
| | 19 1930 | 2050 | | NO FLARE | PATROL | | | | | | | | | | |
| | 19 2100 | 2110 | | NO FLARE | PATROL | | | | | | | | | | |
| 19 2220 | 2315 | | NO FLARE | PATROL | | | | | | | | | | | |
| KODA | 20 0320 | 0335 | | NO FLARE | PATROL | | | 1- | V | | | | | 1.60 | 88 |
| | 20 0338 E | 0345 | | 0338 | S10 E18 | 7619 | | | | | | | | | |
| | 20 0545 | 0615 | | NO FLARE | PATROL | | | | | | | | | | |
| | 20 1750 | 1850 | | NO FLARE | PATROL | | | | | | | | | | |
| MITK CATA OTTA | 21 0005 | 0045 | | 0023 | S12 E06 | 7619 | 40 | 1 | C | | | | | | |
| | 21 0945 E | 1140 D | | 1728 | S09 E03 | 7619 | 115 | D | C | | | | | | |
| | 21 1724 | 1739 | | | N35 E36 | 7622 | | 1- | C | | | 0.22 | 0.29 | | F |
| | 22 0245 | 0325 | | NO FLARE | PATROL | | 50 | 1 | C | | | | | | |
| MITK MITK | 22 0500 | 0550 | | 0513 | S12 W07 | 7619 | | 1- | C | | | | | | |
| | 22 0610 | 0610 | D | 0548 | N06 W90 | 7624 | | | C | | | | | | |
| | 22 1525 | 1530 | | NO FLARE | PATROL | | | | | | | | | | |
| | 22 1540 | 1550 | | NO FLARE | PATROL | | | | | | | | | | |
| | 22 1705 | 1710 | | NO FLARE | PATROL | | | | | | | | | | |
| | 22 1720 | 1730 | | NO FLARE | PATROL | | | | | | | | | | |
| | 22 2010 | 2020 | | NO FLARE | PATROL | | | | | | | | | | |
| | 22 2030 | 2045 | | NO FLARE | PATROL | | | | | | | | | | |
| | 22 2050 | 2310 | | NO FLARE | PATROL | | | | | | | | | | |
| | 23 0205 | 0330 | | NO FLARE | PATROL | | | | | | | | | | |
| 23 0500 | 0615 | | NO FLARE | PATROL | | | | | | | | | | | |
| UCCL HUAN — CAPE HUAN HUAN HUAN | 24 0400 | 0410 | | NO FLARE | PATROL | | | | | | | | | | |
| | 24 0620 | 0630 | | NO FLARE | PATROL | | | | | | | | | | |
| | 24 1200 | 1203 | | NO FLARE | PATROL | | | 4 | C | | | | | | D |
| | 24 1248 | 1303 | | 1251 | S12 W43 | 7619 | | 1- | C | | | 0.20 | 0.25 | | D |
| | 24 1250 | 1300 | | 1251 | N37 E05 | 7622 | | 1- | C | | | 0.80 | 1.00 | | D |
| | 24 1406 | 1436 | | NO FLARE | N38 E05 | 7622 | | 1- | C | | | 0.10 | 0.10 | | CD |
| | 24 1645 | 1707 | D | 1652 | N37 E05 | 7622 | | 1- | P | | | 0.30 | 0.40 | | CD |
| | 24 1719 E | 1721 | D | NO FLARE | N37 E05 | 7622 | | 1- | P | | | 0.10 | 0.10 | | CD |
| | 24 2035 | 2220 | | NO FLARE | PATROL | | | | | | | | | | |
| | 25 0405 | 0520 | | NO FLARE | PATROL | | | | | | | | | | |
| LOCK | 25 1555 | 1850 | | NO FLARE | PATROL | | | 1- | C | | | 0.20 | 0.20 | | 10 |
| | 25 2200 | 2230 | | 2215 | N30 E08 | 7622 | | | | | | | | | |
| | 26 0026 | 0032 | | 0029 | N33 W23 | 7622 | | 1- | C | | | 0.40 | 0.52 | | H |

SOLAR FLARES

DECEMBER 1964

| OBSERVATORY | DATE | OBSERVED UNIVERSAL TIME | | LOCATION | | | DURA- TION — MINUTES | IM- POR- TANCE | OBS COND. | MEASUREMENTS | | | | REMARKS |
|-------------|----------|-------------------------|--------|--------------|---------|-------------|-------------------------------|----------------------|--------------|--------------|------------------------|------------------------|--------------------------------|---------|
| | | START | END | MAX PHASE | APPROX. | | | | | TIME | MEAS AREA Sq Deg | CORR AREA Sq Deg | MAX WIDTH H ₀ | |
| | | | | | LAT | MER DIST | | | | | | | | |
| SYDN | DEC 1964 | | | | | | | | | | | | | |
| | 26 | 0340 | 0345 | NO FLARE | PATROL | | | | | | | | | |
| | 26 | 0640 | 0700 | NO FLARE | PATROL | | | | | | | | | |
| | 26 | 2245 | 2315 | NO FLARE | PATROL | | | | | | | | | |
| | 27 | 0129 E | 0138 | 0132 | S00 E57 | 7627 | | 1- | P | 0132 | 1.00 | 1.90 | | G |
| UCCL | 27 | 0330 | 0425 | NO FLARE | PATROL | | | | | | | | | |
| | 27 | 1041 | 1044 | | N01 E60 | 7627 | | 1- | 3 | | | | | E |
| | 27 | 1113 | 1116 | | N01 E60 | 7627 | | 1- | 3 | | | | | D |
| | 27 | 1120 | 1122 | | N01 E60 | 7627 | | 1- | 3 | | | | | D |
| | 27 | 1128 | 1141 | | N01 E60 | 7627 | | 1- | 3 | | | | | D |
| KODA | 27 | 2020 | 2200 | NO FLARE | PATROL | | | | | | | | | |
| | 28 | 0609 E | 0612 | 0609 | N25 E43 | 7626 | | 1- | V | 0609 | | | 1.20 | 88 |
| | 28 | 0650 E | 0655 | 0650 | N25 E43 | 7626 | | 1- | V | 0650 | | | 1.20 | 88 |
| | 28 | 1252 | 1321 | 1259 | S00 E40 | 7627 | | 1- | C | 1259 | 1.00 | 1.30 | | |
| | 28 | 1254 | 1326 | 1305 | S01 E42 | 7627 | 32 | 1 | 3 | | | | | E |
| HUAN | 28 | 1258 E | 1337 D | 1306 | S01 E39 | 7627 | | 1- | P | 1305 | .50 | .65 | | CE |
| | 28 | 1705 | 1711 | 1706 | N23 E32 | 7626 | | 1- | C | | .80 | .90 | | 17 |
| | 28 | 1708 | 1708 | | | | | 1- | | | | | | |
| | 28 | 1920 | 2335 | NO FLARE | PATROL | | | | | | | | | |
| | 29 | 0229 | 0252 | 0237 | S02 E34 | 7627 | | 1- | C | 0237 | 1.40 | 2.08 | | G |
| SYDN | 29 | 0306 | 0323 | 0314 | S00 E29 | 7627 | 17 | 1 | C | 0314 | 1.60 | 3.40 | | GH |
| | 29 | 0850 | 0918 D | | N34 W67 | 7622 | | 1- | 2 | | | | | |
| | 29 | 0915 | 0918 D | | N03 E24 | 7627 | | 1- | 2 | | | | | |
| | 29 | 1550 | 1555 | NO FLARE | PATROL | | | | | | | | | |
| | 29 | 1825 | 1830 | NO FLARE | PATROL | | | | | | | | | |
| MITK | 29 | 2120 | 2330 | NO FLARE | PATROL | | | | | | | | | |
| | 30 | 0242 | 0302 | 0243 | N03 E03 | 7625 | 20 | 1 | C | | | | | |
| | 30 | 0846 E | 1050 D | | N34 W80 | 7622 | 124 D | 1 | 1 | 0902 | 3.00 | | 157 | |
| | 30 | 0920 | 0929 | | N22 E09 | 7626 | | 1- | 2 | 0922 | .70 | .70 | | |
| | 30 | 0922 E | 1148 D | | N20 E14 | 7626 | 146 D | 1+ | | 0923 | | | | |
| HTPR | 30 | 0925 | 0940 | 0928 | N23 E16 | 7626 | | 1- | 1 | 0928 | .30 | .40 | | D |
| | 30 | 1027 E | 1050 D | | N22 E10 | 7626 | 23 D | 1 | | 1040 | 2.00 | 2.20 | 150 | |
| | 30 | 1032 | 1040 | 1034 | N22 E12 | 7626 | | 1- | | 1034 | .60 | .70 | | E |
| | 30 | 1136 | 1150 | 1139 | N23 E11 | 7626 | | 1- | C | 1139 | 1.10 | 1.20 | | EJ |
| | 30 | 1141 E | 1253 | | N21 E10 | 7626 | | 1- | P | 1141 | .60 | .70 | | E |
| HUAN | 30 | 1143 | 1148 | 1146 | N22 E10 | 7626 | | 1- | C | 1146 | .60 | .70 | | E |
| | 30 | 1146 | 1207 | 1157 | N31 W80 | 7622 | | 1- | C | 1157 | .40 | .40 | | D |
| | 30 | 1308 E | 1323 D | 1317 | N31 W80 | 7622 | | 1- | P | 1317 | .20 | .20 | | D |
| | 30 | 1318 | 1326 | | N34 W80 | 7622 | | 1- | 3 | 1322 | 1.00 | | 145 | |
| | 30 | 1609 | 1620 | 1615 | S12 W87 | 7623 | | 1- | C | | .27 | | 17 | |
| SACP | 30 | 2155 | 2210 | NO FLARE | PATROL | | | | | | | | | |
| | 30 | 2245 | 2330 | NO FLARE | PATROL | | | | | | | | | |
| | 31 | 0216 E | 0225 | 0218 | N23 E01 | 7626 | | 1- | 2 | 0218 | .25 | .25 | | |
| | 31 | 0217 | 0226 | 0218 | N22 E02 | 7626 | | 1- | C | | | | | |
| | 31 | 0600 | 0609 | 0605 | N23 W00 | 7626 | | 1- | 2 | 0605 | .20 | .20 | | |
| CAPS | 31 | 0826 E | 1144 | | N20 W00 | 7626 | 198 D | 1 | 3 | 0825 | 4.00 | 4.30 | 171 | K |
| | 31 | 0855 | 0904 | 0857 | N23 W01 | 7626 | | 1- | 2 | 0857 | .17 | .17 | | |

SOLAR FLARES

DECEMBER 1964

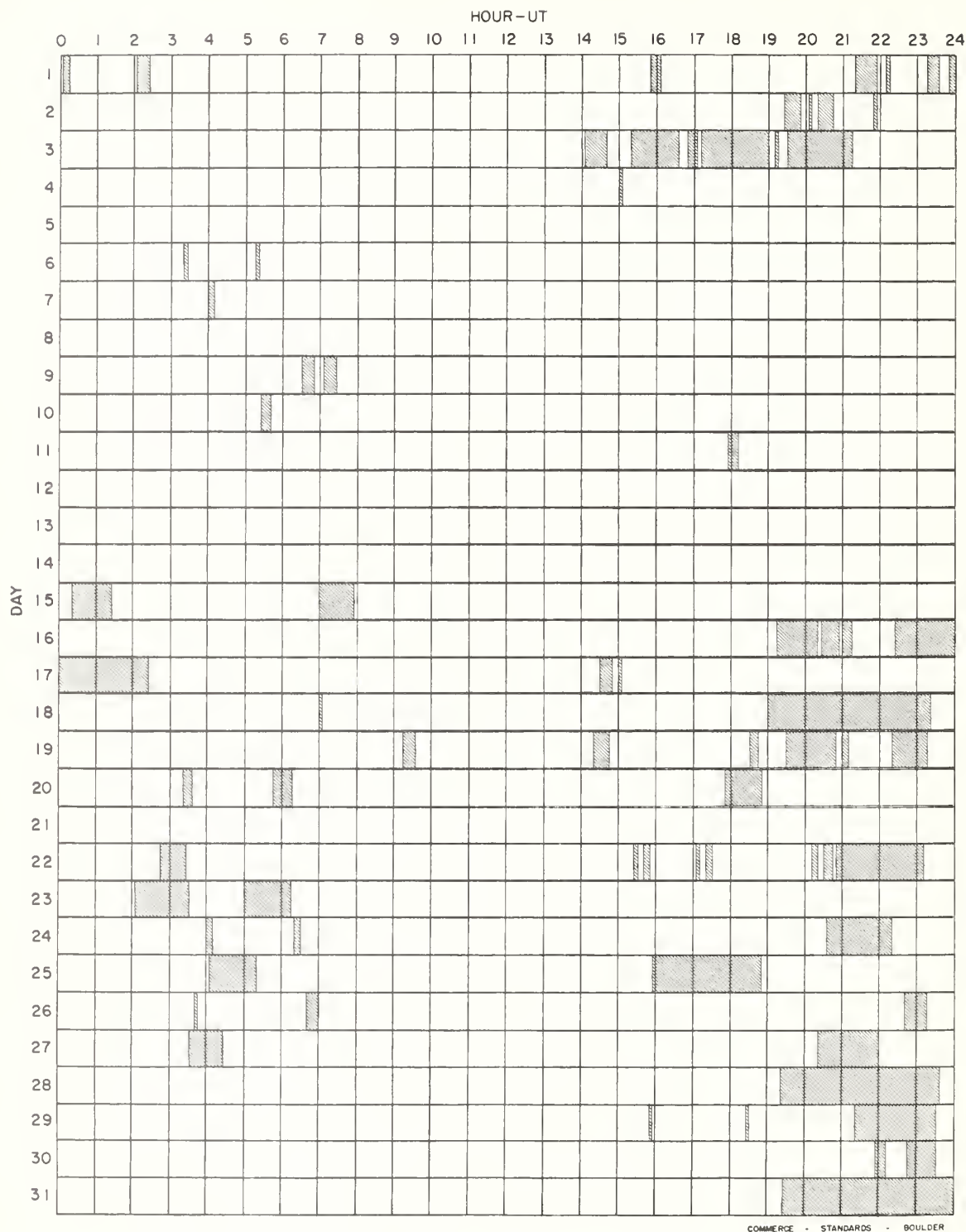
| OBSERVATORY | DATE | OBSERVED UNIVERSAL TIME | | LOCATION | | | DURA TION — MINUTES | IM- FOR- TANCE | OBS COND. | TIME | MEASUREMENTS | | | REMARKS | | |
|-------------|----------|----------------------------|--------|----------|---------|---------------|------------------------------|----------------------|--------------|------|---------------------------|------------------------|-------------------------|---------|--------------------|-----------------|
| | | START | END | LAT. | APPROX. | MER. DIST. | | | | | McMATH PLACE REGION | MEAS AREA Sq Deg | CORR. AREA Sq Deg | | MAX WIDTH Ha | MAX INT % |
| | | | | | | | | | | | | | | | | |
| _____ | DEC 1964 | | | | | | | | | | | | | | | |
| CATA | 31 | 0900 E | 1020 D | N21 W03 | | | 7626 | 1 | | 0910 | | | | | | |
| LVOV | 31 | 0953 E | 1212 D | N21 W02 | | | 7626 | 2 | | | | | | | | |
| HUAN | 31 | 1520 | 1528 | N22 W03 | | | 7626 | 1- | C | 1526 | .20 | .20 | | CDH | | |
| SACP | 31 | 1723 | 1740 | N23 W08 | | | 7626 | 1- | C | | .54 | .56 | 21 | | | |
| LOCK | 31 | 1723 | 1740 | N23 W08 | | | 7626 | 1- | C | 1727 | .60 | .60 | 20 | | | |
| MCMA | 31 | 1723 | 1740 | N23 W07 | | | 7626 | 1- | 2 C | 1728 | 1.00 | 1.10 | | E | | |
| HUAN | 31 | 1723 E | 1741 | N23 W07 | | | 7626 | 1- | P | 1727 | .70 | .80 | | EH | | |
| | 31 | 1925 | 2400 | NO FLARE | | | | | | | | | | | | |

COMMERCE - STANDARDS - BOULDER

These flares are addenda to the December 1964 flares published in CRPL-F 245 for January 1965.

INTERVALS OF NO FLARE PATROL OBSERVATIONS

DECEMBER 1964



Observatories included:

| | | | | | |
|------------|-------------------|--------------|----------------|-----------------|------------|
| Abastumani | Capetown | Herstmonceux | Kodaikanal | Mitaka | Siberie |
| Arcetri | Capri-F (German) | Huancayo | Locarno | Nizamia | Sydney |
| Arosa | Capri-S (Swedish) | Ikomasan | Lockheed | Ondrejov | Tachkent |
| Athenes | Climax | Istanbul | Lvov | Ottawa | Tortosa |
| Bakou | Crimee | Izmiran | Manila | Sacramento Peak | Uccle |
| Bucharest | Haute-Provence | Kanzelhoehe | McMath-Hulbert | Salonique | Voroshilov |
| | | | | | Zurich |

IONOSPHERIC EFFECTS OF SOLAR FLARES

IIIq

SHORT WAVE RADIO FADEOUTS
SUDDEN COSMIC NOISE ABSORPTION
SUDDEN ENHANCEMENTS OF ATMOSPHERICS
SOLAR NOISE BURSTS AT 18 Mc/s

SUDDEN PHASE ANOMALIES
SUDDEN ENHANCEMENTS OF SIGNAL
SUDDEN FREQUENCY DEVIATIONS

FEBRUARY 1965

| FEB 1965 | UNIVERSAL TIME | | | TYPE SWF IMP | IMPORTANCE | | | | | | BUR | WIDE SPREAD INDEX | STATIONS | KNOWN FLARE |
|-------------|----------------|------|------|--------------------|------------|------|-----|-----|-----|-----|-----|-------------------------|--|----------------|
| | START | END | MAX | | ABS | SCNA | SEA | SPA | SES | SFD | | | | |
| 02 | 2032 | 2034 | | | | | | | | | 1 | 5 | MC BO | |
| 02 | 2051 | 2053 | | | | | | | | | 1 | 5 | BO MC | 2043 |
| 05 | 1757 | 1820 | 1812 | | | | | 36 | | | | 1 | BO (N5588KC-36, NPG-18) | 1750 |
| 05 | 1759 | 1801 | | | | | | | | | 1 | 5 | MC BO | |
| 05 | 1802 | 1804 | | | | | | | | | 1 | 5 | MC BO | |
| 05 | 1808 | 1812 | | | | | | | | | 2 | 5 | MC BO | |
| 05 | 1814 | 1816 | | | | | | | | | 1 | 5 | MC BO | |
| 05 | 1820 | 1825 | | | | | | | | | 1 | 1 | BO | |
| 07 | 1821 | 1827 | 1822 | | | | | | | 6 | | 1 | BO (WWV10-0.6, WWV15-0.2, KFE4-0.2, KFE5-0.2) | |
| 14 | 1920 | 2000 | 1950 | | | | | 30 | | | | 1 | BO (NPG-30) | |
| 18 | 0510 | 0541 | 0517 | | 25 | 2 | | | | | | 1 | DE | |
| 18 | 0510 | 0620 | | | | | | | 2 | | | 1 | DE | |

COMMERCE • STANDARDS • BOULDER

Note: No SCNA, SEA, Burst report received from Hawaii.

Errata

In CRPL-F247, table IIIh, on Jan 3 at 1011 UT the event was an importance 1, SCNA with 4% absorption, not an SWF importance 4, and on Jan 4, 28 at 0215 UT the G-SWF was importance 1.

RIOMETER EVENTS

FEBRUARY 1965

FROBISHER BAY

30 Mc/s

| FEB 1965 | START UT | END UT | MAX. UT | MAX. ABSORP. db, (tenths) | NO. OF PEAKS | FEB 1965 | START UT | END UT | MAX. UT | MAX. ABSORP. db, (tenths) | NO. OF PEAKS |
|-------------|-------------|-----------|------------|------------------------------------|--------------------|-------------|-------------|-----------|------------|------------------------------------|--------------------|
| 1 | * | | | | | 16 | 0412 | 0548 | 0425 | 30 | 2 |
| 2 | 0353 | 0458 | 0359 | 3 | 1 | 17 | * | | | | |
| 3 | * | | | | | 18 | * | | | | |
| 4 | ** | | | | | 19 | ** | | | | |
| 5 | ** | | | | | 20 | ** | | | | |
| 6 | 0040 | 2310 | 0123 | 29 | 6 | 21 | ** | | | | |
| 7 | 0318 | 1438 | 0412 | 10 | 7 | 22 | ** | | | | |
| 8 | ** | | | | | 23 | ** | | | | |
| 9 | ** | | | | | 24 | 0240 | 0302 | 0247 | 6 | 1 |
| 10 | 0130 | 0316 | 0152 | 15 | 6 | 25 | * | | | | |
| 11 | ** | | | | | 26 | 0250 | 0502 | 0316 | 35 | 4 |
| 12 | * | | | | | 27 | ** | | | | |
| 13 | * | | | | | 28 | 0210 | 0346 | 0222 | 16 | 4 |
| 14 | * | | | | | | | | | | |
| 15 | 0110 | 0424 | 0139 | 25 | 3 | | | | | | |
| 15 | 1610 | 1720 | 1650 | 6 | 1 | | | | | | |

COMMERCE - STANDARDS - BOULDER

* No Event

** No Data

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

IVa

MARCH 1965

ARO-OTTAWA
DRAO-PENTICTON

2800 Mc/s
2700 Mc/s

| MAR 1965 | U R A N E | DESCRIPTIVE TYPE | START UT | DURATION HRS MIN | MEAN FLUX | MAXIMUM | | REMARKS |
|-------------|-----------------------|-------------------------|-----------------|-------------------------|------------------|---------|------|---------|
| | | | | | | TIME | FLUX | |
| 6 | 3 | Simple 3 | 1812 | 2 06 | 1.0 | 1911 | 2.0 | |
| 7 | 1 | Simple 1 | 1603 | 01.5 | 0.6 | 1603.8 | 1.2 | |
| | 4 | Post Increase A | | 12.5 | 0.3 | | 0.6 | |
| | 1 | Simple 1 | 1607.5 | 01 | 0.7 | 1608 | 1.4 | |
| 13 | 1 | Simple 1 | 2050.5 | 01 | 0.6 | 2051 | 1.2 | |
| 25 | 3 | Simple 3A | 2354 | 1 01 | 3.0 | 2412 | 4.0 | |
| | 1 | Simple 1 | 2359 | 02 | 3.4 | 2400 | 6.4 | |
| | 1 | Simple 1 | 2401.5 | 01 | 0.4 | 2402 | 0.8 | |

COMMERCE - STANDARDS - BOULDER

HOURS OF OBSERVATION, JANUARY, FEBRUARY, MARCH, 1965

OBSERVING PERIOD:

January 13:25 - 23:20 UT
February 13:00 - 24:30 UT
March 12:20 - 01:25 UT

With the following exceptions:

- (1) Observations commenced: Jan. 24 at 13:45 UT
Feb. 13 at 13:45 UT
25 at 13:30 UT
Mar. 3 at 13:05 UT
4 at 13:20 UT
5 at 13:10 UT
8 at 13:10 UT
26 at 12:35 UT
- (2) Daily interruption of observations, approximately 20 minutes in duration, for calibration purposes:

In the period 14:00 - 15:00 UT

SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

MARCH 1965

NBS BOULDER

108 Mc s

| March 1965 | TYPE | START UT | TIME OF MAXIMUM UT | DURATION MINUTES | INTENSITY |
|---------------|------|-------------|--------------------------|---------------------|-----------|
| 19 | 7 | 1900 | 2353 | 356D | 1 |
| 25 | 7 | 2353 | 0027 | 70D | 1 |
| 25 | 3 | 2358 | 2359.8 | 2.9 | 2 |

NOMINAL TIMES OF OBSERVATION

MARCH 1965

NBS BOULDER

108 Mc s

| March 1965 | HOURS OF OBSERVATION U.T. | HOURS OF INTERFERENCE U.T. | March 1965 | HOURS OF OBSERVATION U.T. | HOURS OF INTERFERENCE U.T. |
|---------------|---------------------------------|-------------------------------------|---------------|---------------------------------|----------------------------------|
| 1 | 1339-0037 | 1339-1900 1701-1915 2001-2004 | 17 | 1314-0054 | |
| 2 | 1337-0038 | | 18 | 1312-0055 | |
| 3 | 1336-0039 | | 19 | 1311-0056 | |
| 4 | 1334-0040 | | 20 | 1309-0057 | |
| 5 | 1333-0041 | | 21 | 1307-0058 | |
| 6 | 1331-0042 | | 22 | 1306-1653; | |
| 7 | 1330-0043 | | | 1711-0059 | |
| 8 | 1328-0044 | | 23 | 1304-0100 | |
| 9 | 1327-0045 | | 24 | 1303-0101 | |
| 10 | 1325-0046 | | 25 | 1301-0102 | |
| 11 | 1324-0047 | 1420-1426 1523-1529 | 26 | 1259-0103 | |
| 12 | 1322-0049 | | 27 | 1258-0104 | |
| 13 | 1320-0050 | | 28 | 1256-0105 | |
| 14 | 1319-0051 | | 29 | 1254-0106 | |
| 15 | 1317-0052 | | 30 | 1253-0107 | |
| 16 | 1316-0053 | | 31 | 1251-0108 | |

COMMERCE - STANDARDS - BOULDER

SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

IVc

MARCH 1965

High Altitude Observatory
Boulder

7.6-41 Mc/s

| Date Mar 1965 | Bursts | | | Frequency Range (Mc/s) | Date Mar 1965 | Bursts | | | Frequency Range (Mc/s) |
|---------------------|------------|-----------------|----------------|---------------------------|---------------------|------------|-------------------------|----------------|---------------------------|
| | Type | Time (U.T.) | Inten- sity | | | Type | Time (U.T.) | Inten- sity | |
| 1 | no observ. | 1500-1700 | | | 12 | III | 2209:15-2209:30 | 1- | 23-41 |
| 6 | continuum | 1813:15-1837 | 2 | 18-41 | | III | 2336:45-2337:45 | 1+ | 18-41 |
| | (f) | 1843-1854 | 2 | 26-37 | 13 | III | 1549-1551 | 1+ | 19-41 |
| 7 | III | 1610-1610:30 | 1 | 31-41 | 19 | continuum | 2035-2210 | 1- | 20-41 |
| 8 | no observ. | 1640-1859 | | | | III | 2254:45-2255 | 1- | 21-41 |
| | III | 1914:30-1915 | 2 | 19-41 | | III | 2257:30-2257:45 | 1- | 25-38 |
| | III | 1915:30-1915:45 | 1- | 19-41 | 20 | III | 1909-1909:15 | 1- | 20-41 |
| | no observ. | 2110-2255 | | | | III | 1909:30-1909:45 | 1- | 25-33 |
| 9 | no observ. | 2200-2330 | | | | III | 2108-2108:15 | 1- | 21-41 |
| 12 | III | 1714:30-1715 | 2 | 20-41 | | III | 2108:30-2108:45 | 1- | 21-34 |
| | III | 1721-1721:30 | 2 | 18-41 | 22 | no observ. | 1500-1800 | | |
| | III | 1830-1830:30 | 1 | 21-41 | 23 | no observ. | 1700-2000 | | |
| | III | 2049:15-2050:30 | 1 | 18-41 | 29 | no observ. | 1700-2000 | | |
| | III | 2050:45-2051:45 | 2 | 13-41 | 30 | no observ. | 1819-2400 | | |
| | III | 2114-2115 | 3 | 12-41 | 31 | no observ. | 1625-1916, 2106-2315 | | |

f = amorphous structure

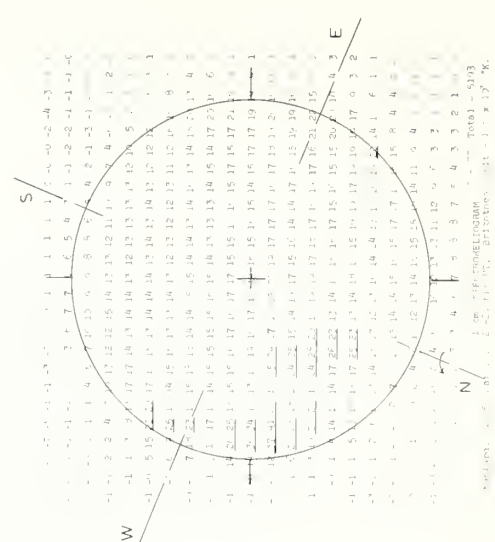
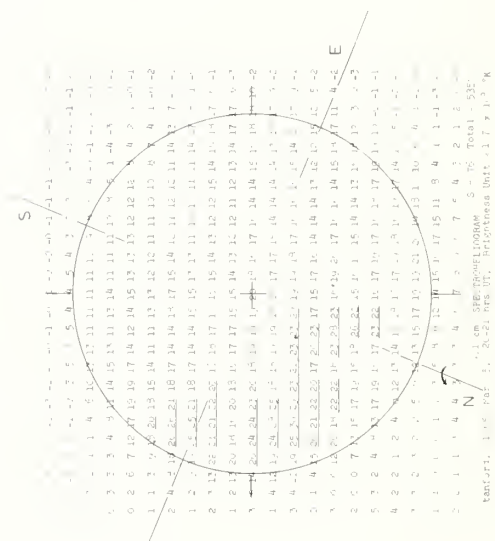
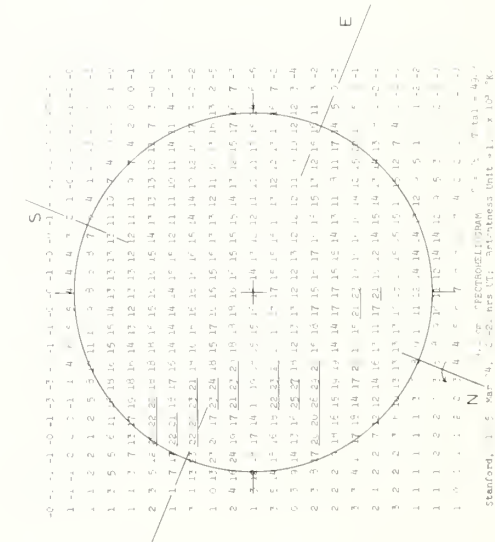
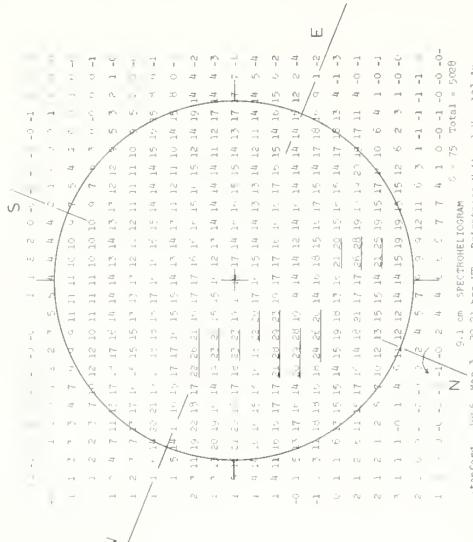
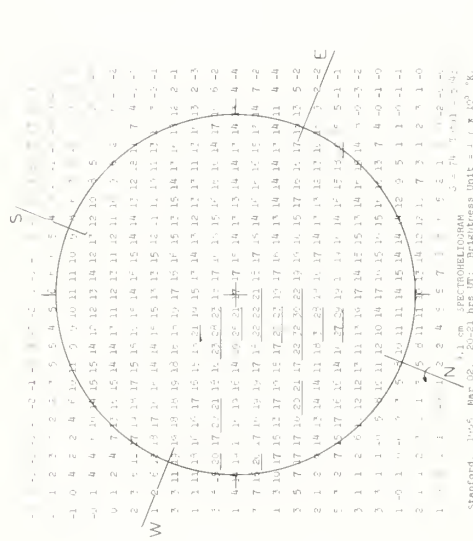
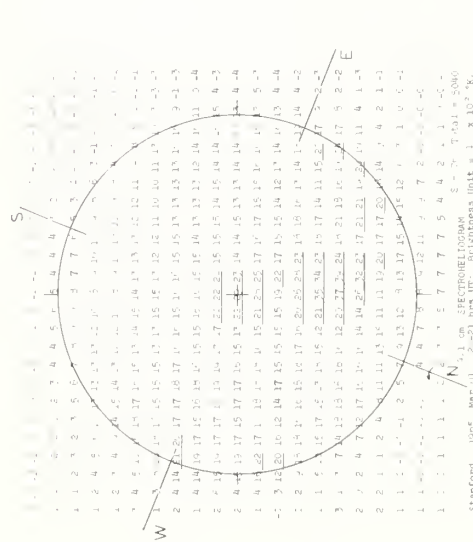
COMMERCE - STANDARDS - BOULDER

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

MARCH 1965

9.1 cm

STANFORD



SOLAR RADIO EMISSION SPECTROHELIOGRAMS

STANFORD

MARCH 1965

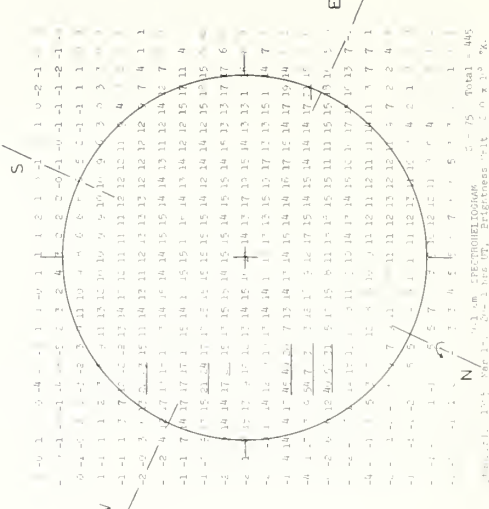
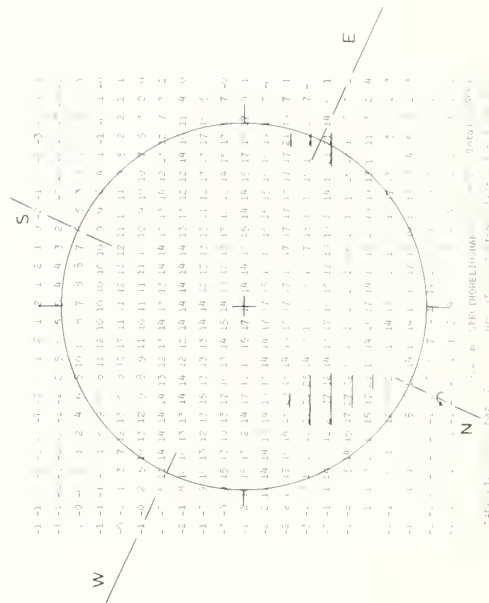
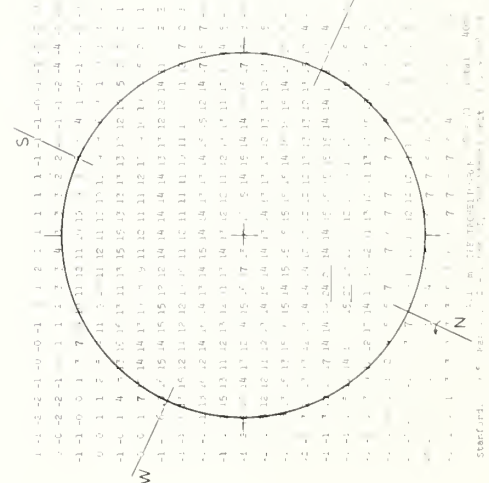
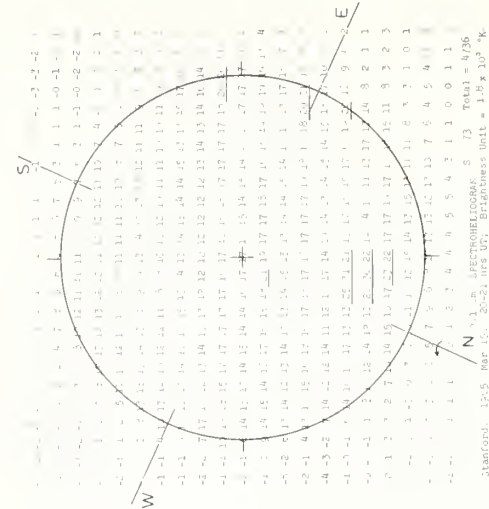
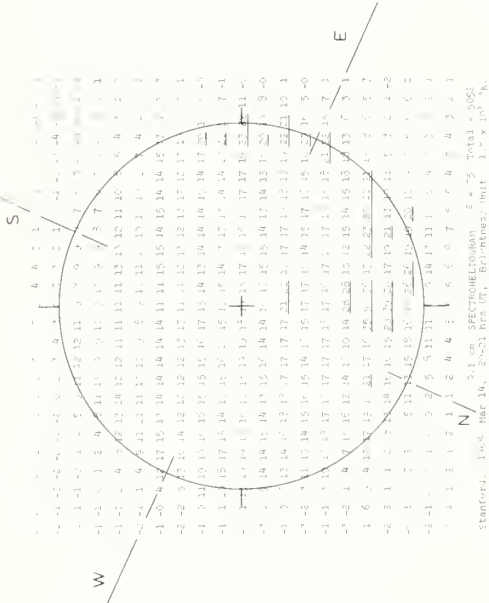
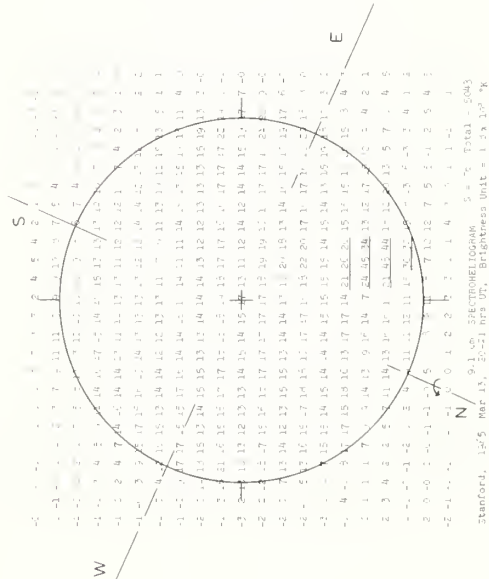
9.1 cm

SOLAR RADIO EMISSION SPECTROHELIOGRAMS

MARCH 1965

STANFORD

9.1 cm

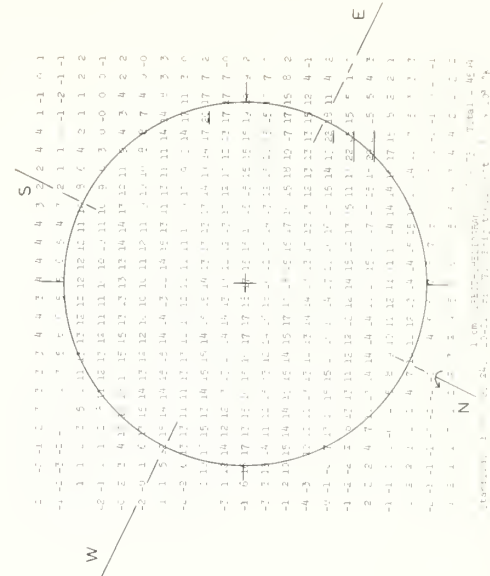
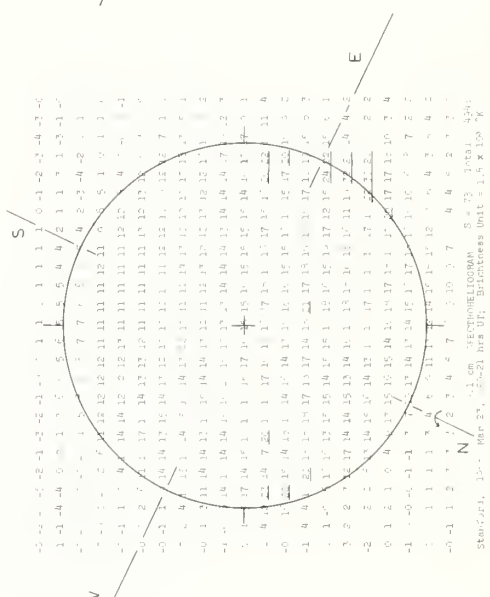
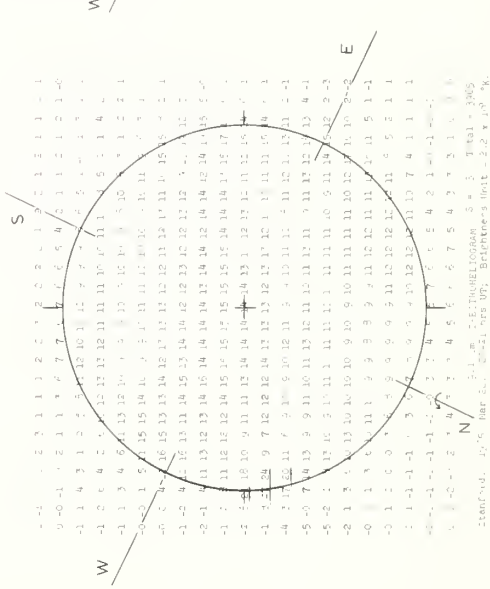
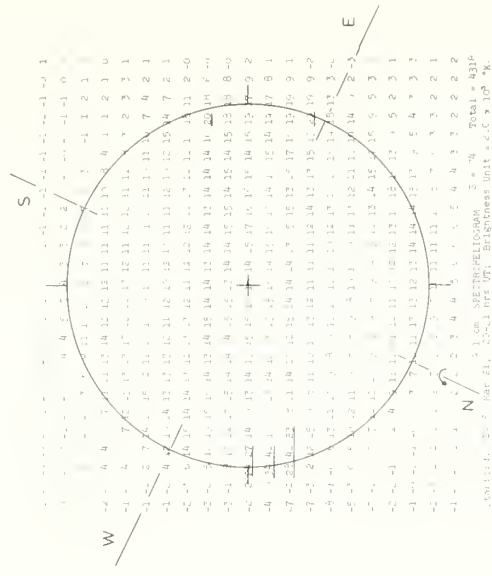
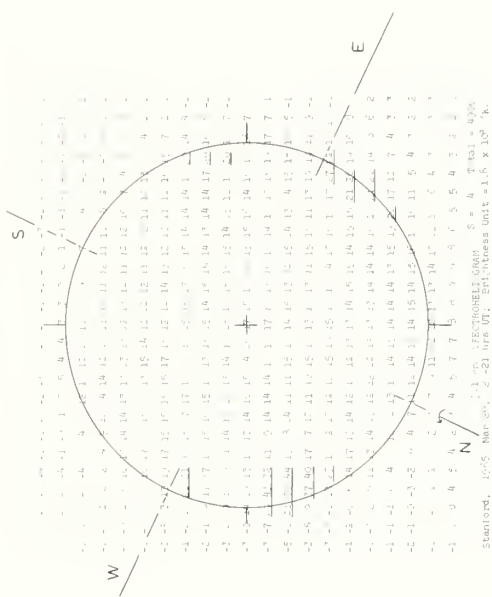
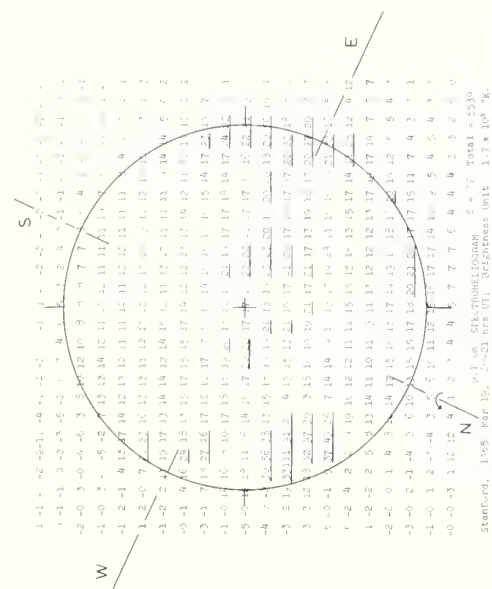


SOLAR RADIO EMISSION SPECTROHELIOGRAMS

MARCH 1965

STANFORD

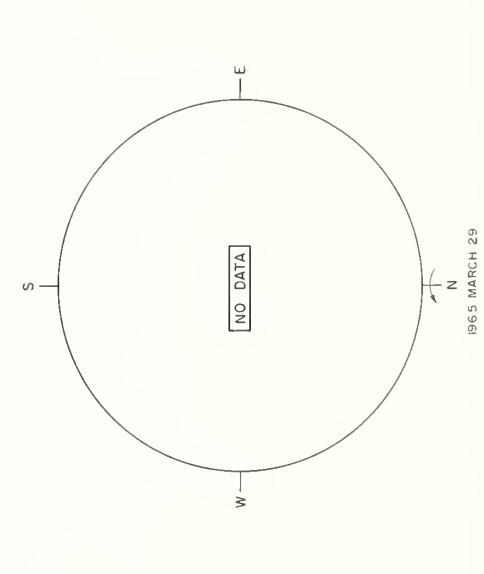
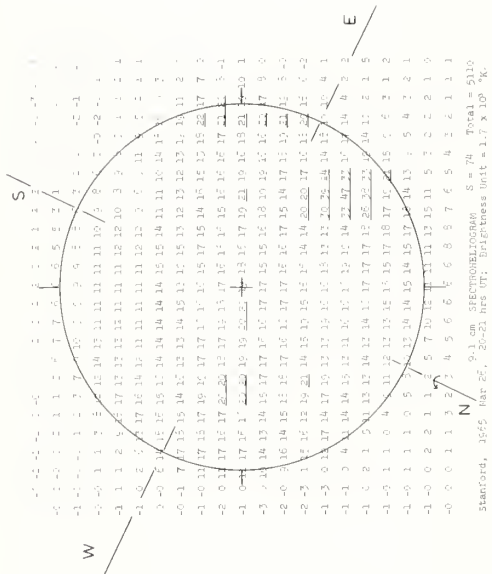
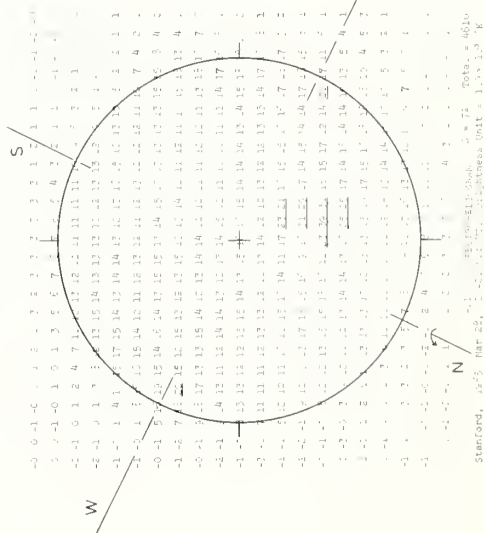
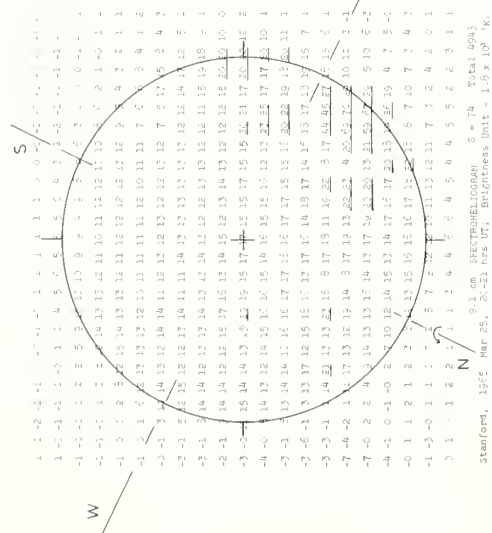
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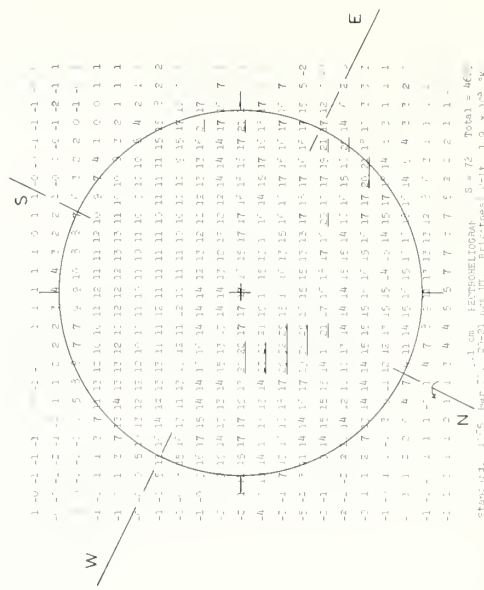
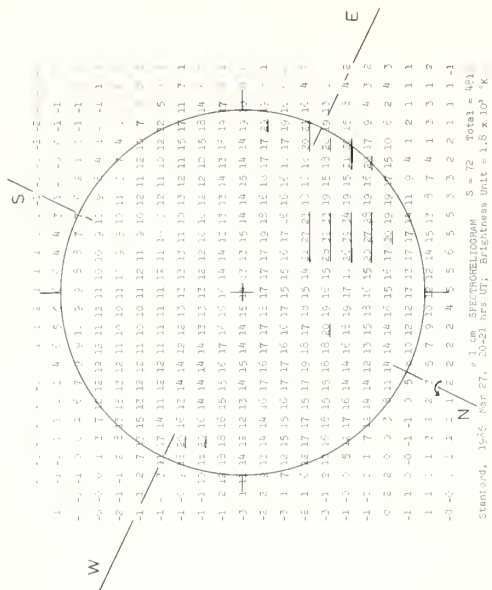
SOLAR RADIO EMISSION SPECTROHELIOGRAMS

MARCH 1965

STANFORD



9.1 cm

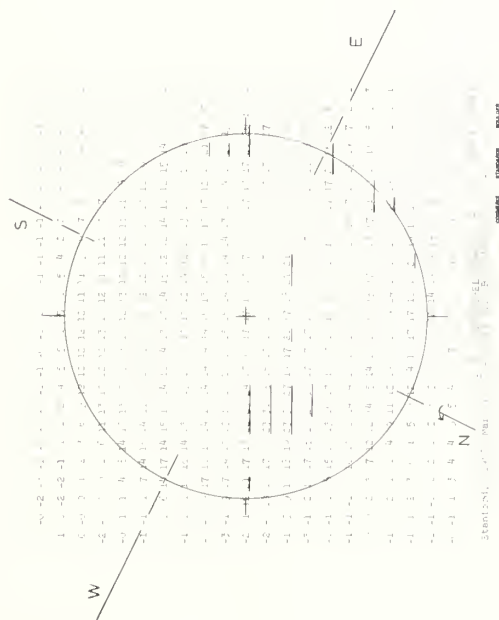


SOLAR RADIO EMISSION SPECTROHELIOGRAMS

MARCH 1965

STANFORD

9.1 cm



COSMIC RAY INDICES

(Neutron Monitors)

FEBRUARY 1965

| FEB. 1965 | CHURCHILL | CLIMAX | DALLAS |
|--------------|----------------------------------|----------------------------------|----------------------------------|
| | DAILY AVERAGE COUNTS PER HOUR | DAILY AVERAGE COUNTS PER HOUR | DAILY AVERAGE COUNTS PER HOUR |
| 1 | 6597.6 | 3367.2 | 6618.8 |
| 2 | 6625.8 | 3360.1 | 6630.3 |
| 3 | 6617.0 | 3355.8 | 6629.7 |
| 4 | 6595.4 | 3348.7 | 6616.9 |
| 5 | 6574.7 | 3353.4 | 6614.5 |
| 6 | 6588.8 | 3376.5 | 6629.8 (12) |
| 7 | 6552.9 | 3386.0 | 6630.0 |
| 8 | 6513.5 | 3349.9 (28) | 6569.1 (18) |
| 9 | 6419.8 | 3297.8 | 6480.2 |
| 10 | 6465.7 | 3327.0 | 6532.1 |
| 11 | 6510.3 | 3340.0 | 6552.3 |
| 12 | 6530.5 | 3349.3 | 6580.9 |
| 13 | 6552.3 | 3337.8 | 6583.5 |
| 14 | 6551.3 | 3347.8 | 6594.0 |
| 15 | 6542.0 | 3348.7 | 6589.7 |
| 16 | 6563.4 | 3346.9 | 6580.1 |
| 17 | 6573.3 | 3340.2 | 6591.5 |
| 18 | 6579.0 | 3345.7 | 6615.1 |
| 19 | 6588.4 | 3352.2 | 6636.5 |
| 20 | 6589.2 | 3362.3 | 6646.1 |
| 21 | 6552.1 | 3352.0 | 6611.5 |
| 22 | 6562.2 | 3368.9 | 6622.6 |
| 23 | 6565.8 | 3374.8 | 6633.8 |
| 24 | 6552.1 | 3355.0 | 6595.5 |
| 25 | 6552.3 | 3343.3 | 6597.6 |
| 26 | 6556.8 | 3342.5 | 6597.4 |
| 27 | 6559.4 | 3352.0 | 6601.5 |
| 28 | 6555.7 | 3372.3 | 6616.6 |

COMMERCE - STANDARDS - BOULDER

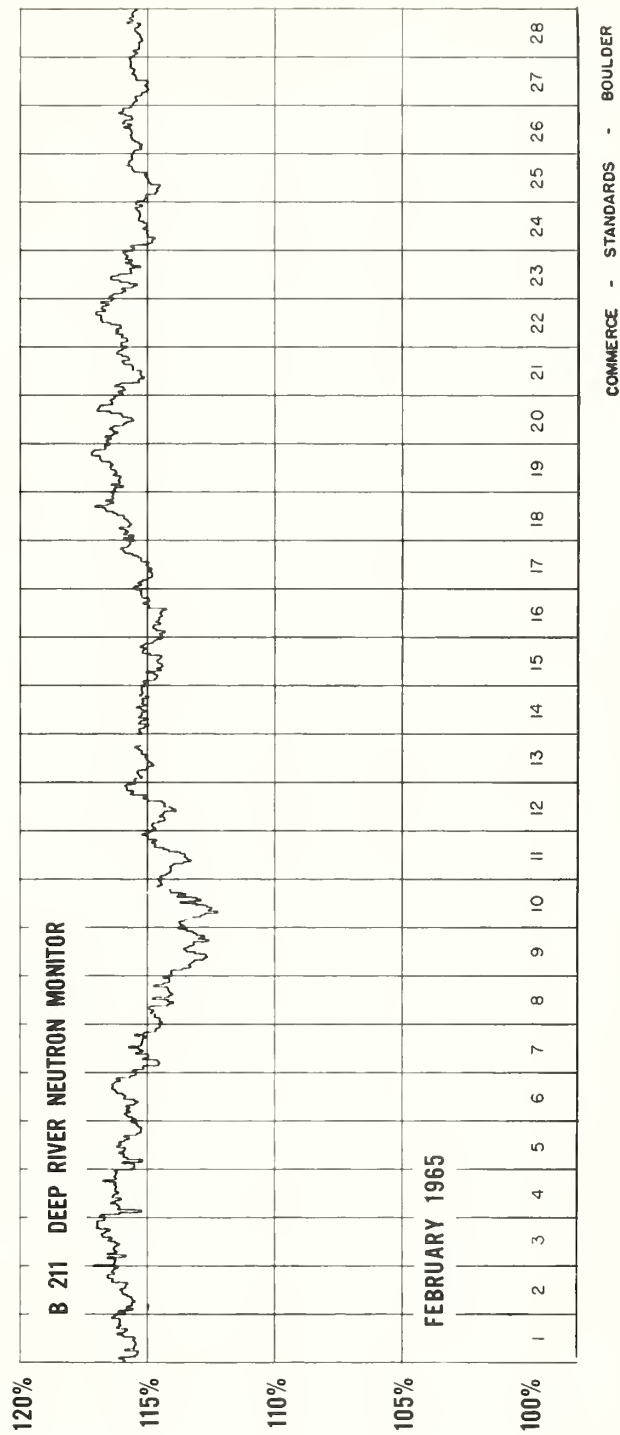
() Number of hours for which data are available if less than 24 (or number of section hours if less than 40 for Climax).

Churchill Super Neutron Monitor, Scaling Factor 120.

Climax IGC Station B305, Scaling Factor 128.

Dallas Super Neutron Monitor, Scaling Factor 120.

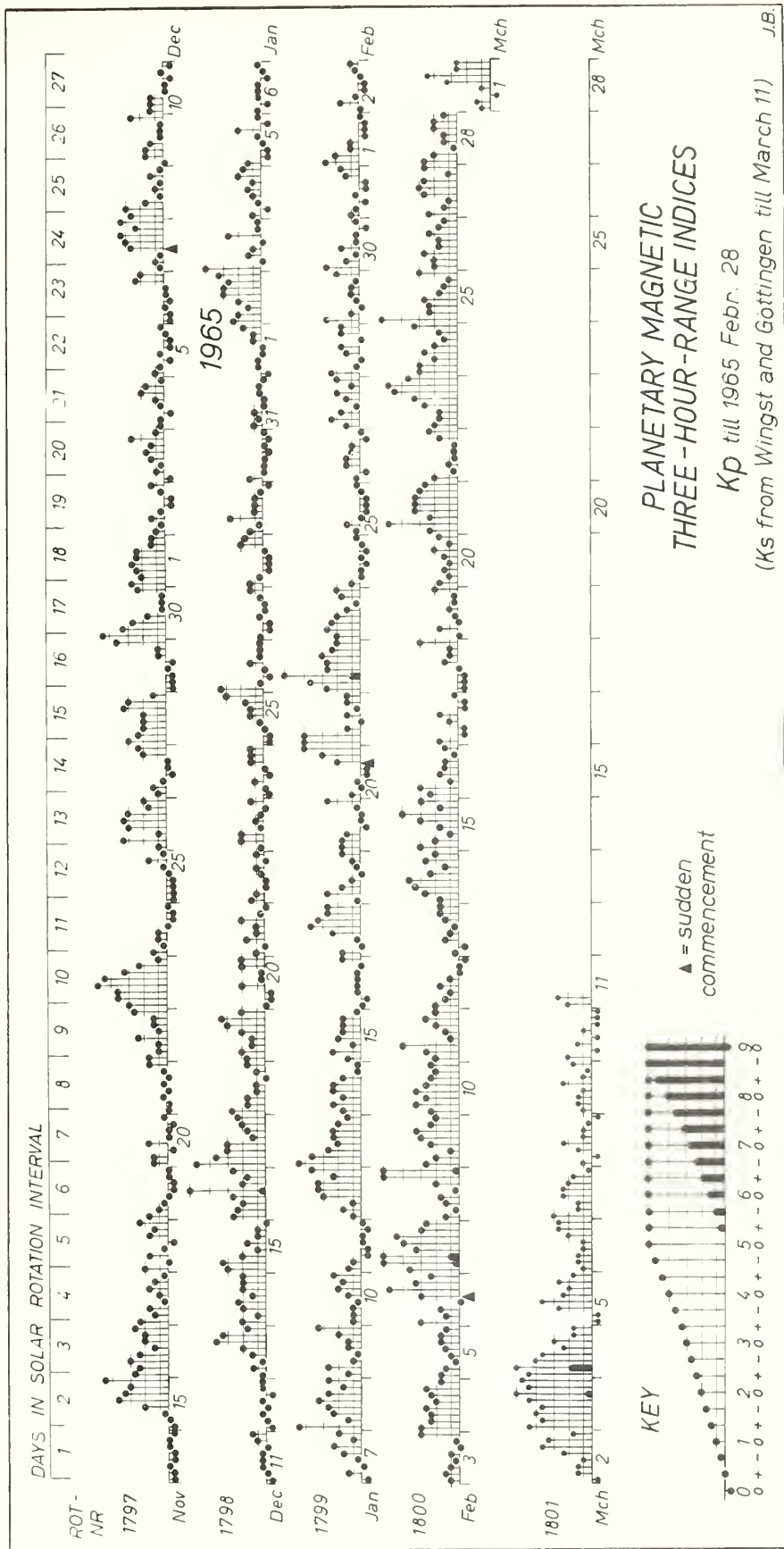
COSMIC RAY INDICES **(Pressure Corrected Hourly Totals)**



GEOMAGNETIC ACTIVITY INDICES

FEBRUARY 1965

| Feb. 1965 | C | Values Kp | | | | | | | | Sum | Ap | Final Selected Days |
|--------------|------|-------------------------|----|----|----|----|----|----|----|-------|----|---------------------------|
| | | Three hour Gr. interval | | | | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | |
| 1 | 0.1 | 3- | 2o | 1o | 1o | 0o | 0o | 0o | 0+ | 7o | 4 | Five Quiet |
| 2 | 0.0 | 0+ | 2- | 1- | 0o | 0o | 0+ | 1- | 1o | 5- | 2 | |
| 3 | 0.3 | 1o | 1+ | 1o | 1- | 1o | 0+ | 1- | 3o | 9o | 5 | |
| 4 | 0.6 | 3o | 2+ | 2+ | 3- | 2o | 2+ | 3- | 2- | 19o | 10 | |
| 5 | 0.4 | 2- | 1+ | 1- | 1o | 1+ | 2- | 2- | 1+ | 11- | 5 | |
| 6 | 1.1 | 3o | 1+ | 2- | 0+ | 3o | 5- | 3+ | 2+ | 20- | 14 | 12 |
| 7 | 1.4 | 4- | 5+ | 6- | 3+ | 4o | 4+ | 3o | 3- | 32o | 31 | 13 |
| 8 | 1.0 | 1+ | 1- | 1+ | 2- | 1- | 2o | 5o | 5+ | 18o | 17 | 17 |
| 9 | 0.8 | 3- | 2o | 1o | 2+ | 3o | 3+ | 2+ | 2o | 19- | 10 | 19 |
| 10 | 0.7 | 2+ | 3+ | 3- | 3+ | 3- | 2+ | 2o | 2+ | 21o | 12 | |
| 11 | 0.6 | 2o | 3- | 4o | 1o | 1+ | 2o | 3- | 2o | 18- | 10 | Five Disturbed |
| 12 | 0.1 | 2o | 1+ | 1o | 2- | 1o | 0+ | 0+ | 0o | 8- | 4 | |
| 13 | 0.4 | 1- | 0o | 1+ | 1o | 1- | 1+ | 2- | 2- | 8+ | 4 | |
| 14 | 0.8 | 2- | 3- | 3+ | 4- | 2+ | 1+ | 3- | 2o | 20- | 11 | |
| 15 | 0.9 | 3o | 2o | 1o | 2- | 3o | 4o | 2- | 3o | 19+ | 12 | |
| 16 | 0.2 | 2+ | 3o | 1o | 2- | 1+ | 1+ | 1- | 1+ | 13- | 6 | 21 |
| 17 | 0.0 | 2- | 0o | 0o | 1o | 2- | 0o | 0o | 1- | 5o | 2 | 23 |
| 18 | 0.4 | 0o | 0o | 0o | 0+ | 1+ | 1o | 1o | 3o | 7- | 4 | 25 |
| 19 | 0.2 | 0+ | 2- | 0+ | 1- | 1o | 1- | 1- | 2o | 7+ | 4 | |
| 20 | 0.3 | 2- | 1o | 1+ | 1o | 1+ | 2o | 1o | 2- | 11o | 5 | |
| 21 | 0.9 | 2+ | 5- | 2+ | 3+ | 3+ | 3+ | 3o | 3- | 25o | 17 | Ten Quiet |
| 22 | 0.1 | 2o | 1- | 1o | 1- | 1- | 1- | 2- | 2+ | 10- | 5 | |
| 23 | 1.1 | 2o | 2- | 2- | 3- | 3+ | 4+ | 5- | 4- | 24o | 18 | |
| 24 | 0.7 | 3o | 3o | 2o | 3- | 2o | 1+ | 2- | 3+ | 19o | 11 | |
| 25 | 0.8 | 5o | 2+ | 2+ | 3- | 2- | 1+ | 1o | 3o | 19+ | 14 | |
| 26 | 0.5 | 2o | 2o | 3- | 2- | 2- | 2+ | 2- | 1+ | 15+ | 7 | 1 |
| 27 | 0.6 | 2+ | 1+ | 1o | 3- | 3o | 3- | 1o | 3- | 17- | 9 | 2 |
| 28 | 0.3 | 3- | 2o | 1- | 1+ | 1+ | 2o | 2o | 1+ | 13+ | 6 | 3 |
| | | | | | | | | | | | | 5 |
| | | | | | | | | | | | | 12 |
| | | | | | | | | | | | | 13 |
| | | | | | | | | | | | | 17 |
| | | | | | | | | | | | | 18 |
| | | | | | | | | | | | | 19 |
| | | | | | | | | | | | | 22 |
| Mean: | 0.55 | | | | | | | | | Mean: | 9 | |



COMMERCE - STANDARDS - BOULDER

NORTH ATLANTIC, NORTH PACIFIC

FEBRUARY 1965

| FEB. 1965 | WHOLE DAY INDICES | | | ADVANCE FORECASTS (Jc- REPORTS) FOR WHOLE DAY | NORTH ATLANTIC | | | | | | | | NORTH PACIFIC | | | GEOMAGNETIC INDICES | | | | | | | |
|----------------------|----------------------|------------------|-----------------------------|---|-------------------------------|----------------|----------------|----------------|---|----------------|----------------|----------------|-------------------------------|----------------|----------------|---------------------|------------|-----------------|----------------|-----------------|------------|-----------------|--|
| | | | | | 6 - HOURLY QUALITY FIGURES | | | | SHORT - TERM FORECASTS ISSUED ABOUT ONE HOUR IN ADVANCE OF. | | | | 8 - HOURLY QUALITY FIGURES | | | K _{PR} | | A _{PR} | | K _{SI} | | A _{SI} | |
| | NORTH ATLANTIC | NORTH PACIFIC | AVERAGE HIGH LATITUDE | | 00 TO 06 | 06 TO 12 | 12 TO 18 | 18 TO 24 | 00 TO 06 | 06 TO 12 | 12 TO 18 | 18 TO 24 | 03 TO 11 | 11 TO 19 | 19 TO 03 | HALF (1) | DAY (2) | 08- SERVED | PRE- DICTED | HALF (1) | DAY (2) | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 6+ | 6 | 6 | 6 | 6- | 6- | 7- | 7- | 6 | 6 | 7 | 7 | 6 | 6 | 7 | 2 | 0 | 4 | 3 | 1 | 0 | 2 | |
| 2 | 6+ | 6 | 6 | 6 | 6- | 6- | 7- | 7- | 6 | 6 | 7 | 7 | 5 | 6 | 7 | 1 | 1 | 2 | 3 | 0 | 0 | 0 | |
| 3 | 6+ | 6 | 6 | 6 | 6o | 6- | 7- | 7- | 6 | 6 | 7 | 7 | 6 | 5 | 7 | 1 | 1 | 4 | 3 | 0 | 0 | 1 | |
| 4 | 6+ | 6 | 6 | 6 | 6+ | 5+ | 7- | 7o | 6 | 6 | 7 | 7 | 6 | 5 | 7 | 3 | 2 | 9 | 5 | 2 | 1 | 5 | |
| 5 | 6+ | 6 | 6 | 6 | 6o | 5o | 7o | 7- | 6 | 5 | 7 | 7 | 6 | 5 | 7 | 1 | 1 | 3 | 3 | 0 | 0 | 1 | |
| 6 | 6+ | 6 | 6 | 6 | 6+ | 5+ | 7- | 7- | 6 | 5 | 7 | 5 | 7 | 5 | 7 | 2 | 3 | 12 | 3 | 1 | 2 | 8 | |
| 7 | 5o | (4) | 5 | 6 | 6o | 4- | 6o | 5o | 5 | 4 | 6 | 6 | 5 | 5 | 4 | (4) | 3 | 23 | 4 | (5) | 3 | 55 | |
| 8 | 5+ | (4) | 5 | 6 | 5- | 4+ | 6+ | 6o | 5 | 3 | 6 | 6 | 5 | 4 | 5 | 1 | 3 | 10 | 7 | 1 | 2 | 4 | |
| 9 | 6o | 5 | 6 | 6 | 6o | 5+ | 7- | 6+ | 5 | 4 | 7 | 7 | 5 | 4 | 6 | 2 | 3 | 8 | 11 | 1 | 2 | 7 | |
| 10 | 6+ | 5 | 6 | 6 | 6+ | 6- | 7- | 6+ | 6 | 5 | 7 | 6 | 5 | 6 | 6 | 3 | 2 | 9 | 5 | 3 | 1 | 10 | |
| 11 | 6o | 5 | 6 | 6 | 6o | 5o | 7- | 6o | 6 | 6 | 7 | 7 | 4 | 4 | 6 | 2 | 2 | 8 | 7 | 2 | 2 | 9 | |
| 12 | 6o | 5 | 6 | 6 | 6o | 5+ | 7- | 7- | 6 | 6 | 7 | 6 | 6 | 5 | 6 | 2 | 0 | 3 | 5 | 1 | 0 | 3 | |
| 13 | 6o | 6 | 6 | 6 | 6o | 5+ | 7- | 7- | 6 | 6 | 7 | 7 | 5 | 6 | 6 | 1 | 1 | 2 | 5 | 1 | 1 | 3 | |
| 14 | 6+ | 6 | 6 | 6 | 6+ | 6- | 6+ | 7- | 6 | 6 | 7 | 6 | 6 | 6 | 6 | 2 | 2 | 8 | 5 | 3 | 2 | 13 | |
| 15 | 6+ | 5 | 6 | 6 | 6+ | 6- | 7- | 7- | 6 | 5 | 7 | 6 | 6 | 5 | 5 | 2 | 3 | 9 | 3 | 1 | 3 | 10 | |
| 16 | 6+ | 6 | 6 | 6 | 6o | 6- | 7- | 7- | 6 | 6 | 7 | 7 | 6 | 6 | 6 | 2 | 1 | 5 | 4 | 2 | 1 | 5 | |
| 17 | 6+ | 6 | 6 | 6 | 6+ | 5+ | 7- | 6+ | 6 | 6 | 7 | 7 | 6 | 6 | 6 | 1 | 1 | 3 | 6 | 0 | 1 | 2 | |
| 18 | 6+ | 6 | 6 | 6 | 6o | 6- | 7- | 7- | 6 | 6 | 7 | 7 | 7 | 6 | 7 | 0 | 1 | 2 | 7 | 0 | 1 | 1 | |
| 19 | 6+ | 6 | 6 | 6 | 6o | 6- | 7- | 7- | 6 | 5 | 7 | 7 | 6 | 5 | 6 | 1 | 1 | 2 | 5 | 0 | 1 | 2 | |
| 20 | 6+ | 6 | 6 | 6 | 6- | 6- | 7- | 7- | 6 | 6 | 7 | 7 | 7 | 6 | 6 | 1 | 1 | 4 | 3 | 1 | 1 | 5 | |
| 21 | 6- | 6 | 6 | 6 | 5+ | 5+ | 7- | 6+ | 6 | 5 | 7 | 7 | 7 | 6 | 6 | 3 | 2 | 13 | 3 | 2 | 2 | 13 | |
| 22 | 6+ | 5 | 6 | 6 | 6- | 6- | 7- | 7- | 6 | 5 | 7 | 7 | 5 | 5 | 5 | 1 | 1 | 3 | 3 | 1 | 1 | 3 | |
| 23 | 6o | 5 | 6 | 6 | 6- | 6- | 7- | 7- | 6 | 6 | 7 | 6 | 7 | 5 | 5 | 2 | 3 | 13 | 4 | 1 | 3 | 12 | |
| 24 | 6o | 5 | 6 | 6 | 6- | 6- | 7- | 7- | 5 | 5 | 7 | 7 | 7 | 4 | 5 | 3 | 2 | 10 | 4 | 2 | 2 | 7 | |
| 25 | 6o | 5 | 6 | 6 | 6o | 5o | 7- | 7- | 6 | 5 | 7 | 7 | 5 | 5 | 5 | 2 | 1 | 8 | 5 | 2 | 1 | 8 | |
| 26 | 6o | 6 | 6 | 6 | 6o | 5- | 7- | 7- | 6 | 5 | 7 | 7 | 7 | 5 | 5 | 2 | 2 | 7 | 5 | 2 | 1 | 9 | |
| 27 | 6o | 6 | 6 | 6 | 6- | 5+ | 7- | 7- | 6 | 5 | 7 | 7 | 7 | 6 | 6 | 2 | 2 | 8 | 3 | 2 | 2 | 9 | |
| 28 | 6o | 6 | 6 | 7 | 6- | 6- | 7- | 6+ | 6 | 5 | 7 | 7 | 7 | 6 | 7 | 1 | 1 | 5 | 3 | 1 | 1 | 4 | |
| SCORES | | | | 25 3 0 0 | | | | | | | | | | | | | | | | | | | |
| QUIET PERIODS: P | | | | | | | | | | | | | | | | | | | | | | | |
| S | | | | | | | | | | | | | | | | | | | | | | | |
| U | | | | | | | | | | | | | | | | | | | | | | | |
| F | | | | | | | | | | | | | | | | | | | | | | | |
| DISTRUBED PERIODS: P | | | | 0 0 0 0 | | | | | | | | | | | | | | | | | | | |
| S | | | | | | | | | | | | | | | | | | | | | | | |
| U | | | | | | | | | | | | | | | | | | | | | | | |
| F | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |

COMMERCE - STANDARDS - BOULDER

NOTES:

1. The advance Jc-forecasts are scored against the average high latitude whole day indices.
2. The observed indices for the North Pacific are low weight because of insufficient data available for their preparation.
3. The predicted A_{PR} indices are issued each Wednesday for the coming seven days. The value for the first day of each prediction period is underscored.

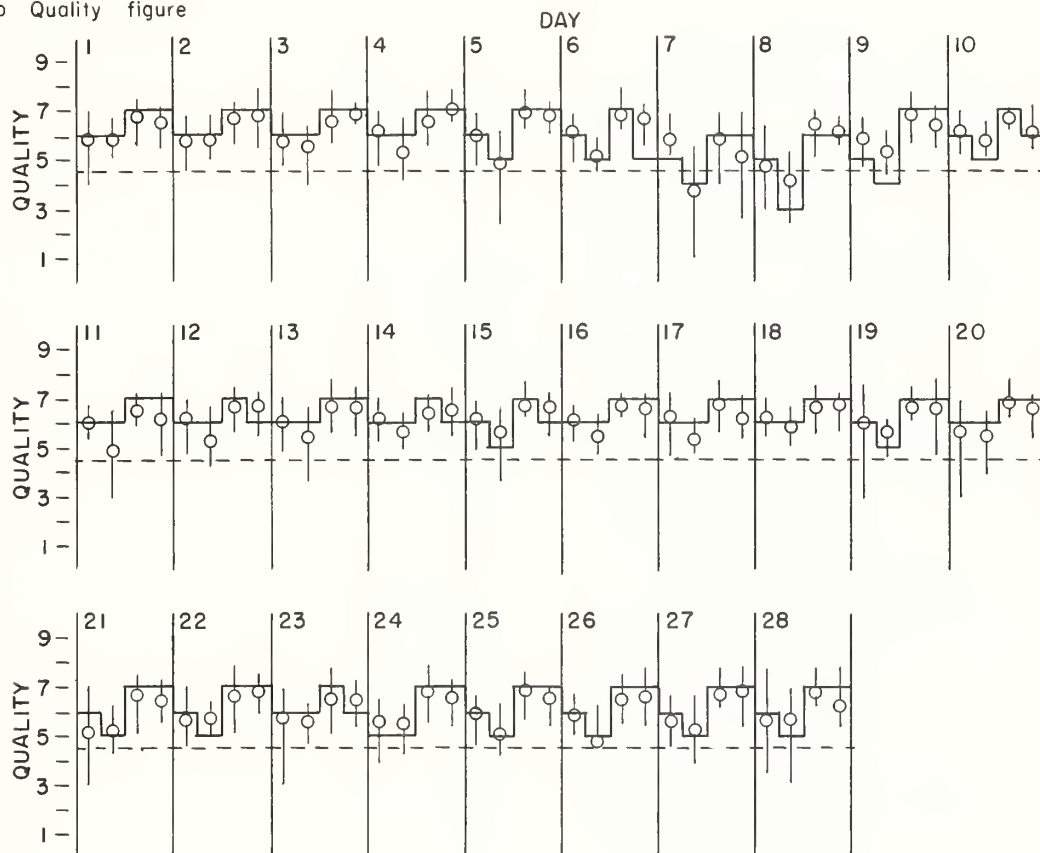
NORTH ATLANTIC

FEBRUARY 1965

— Short-term forecast

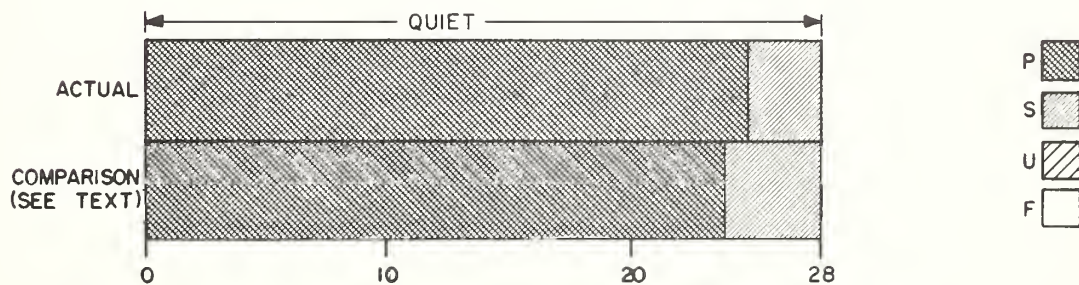
o Quality figure

I Range of reports

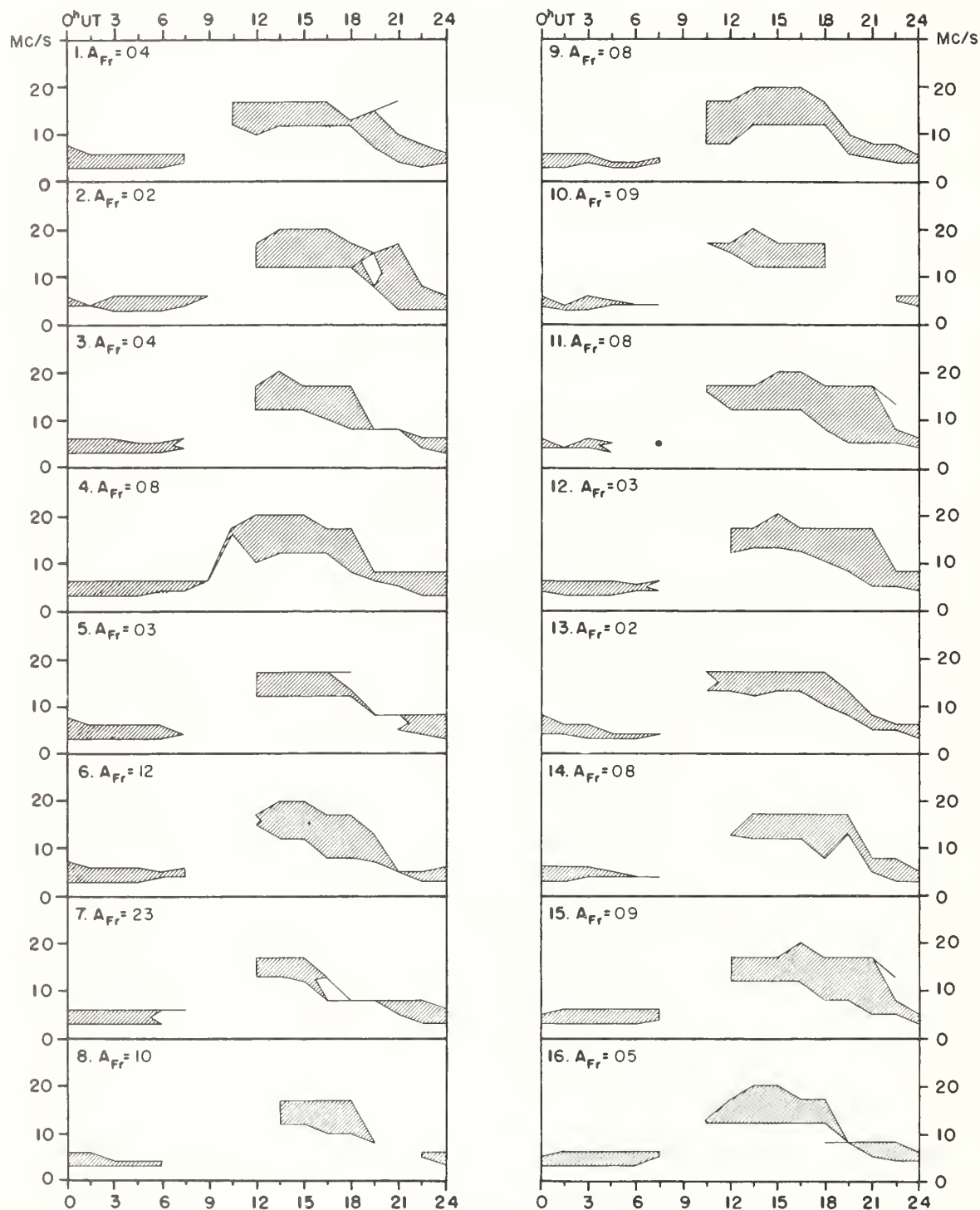


OUTCOME OF ADVANCE FORECASTS -- FINAL ESTIMATES (1 TO 7 DAYS AHEAD)

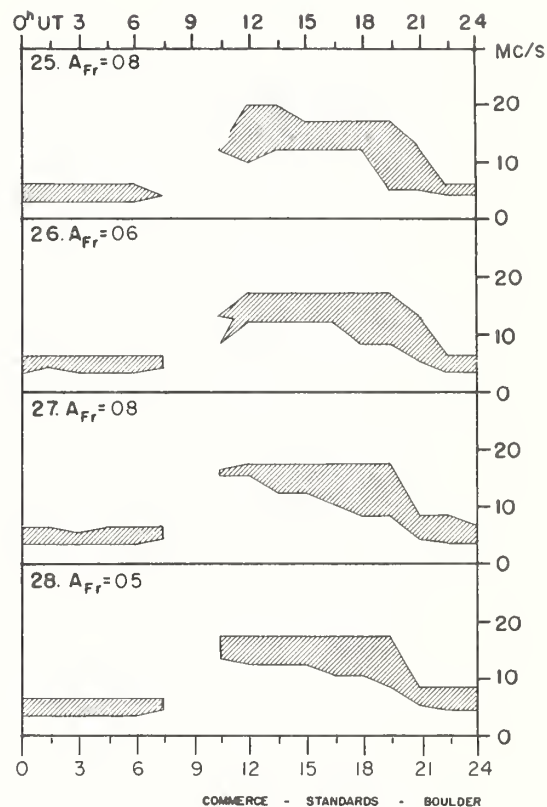
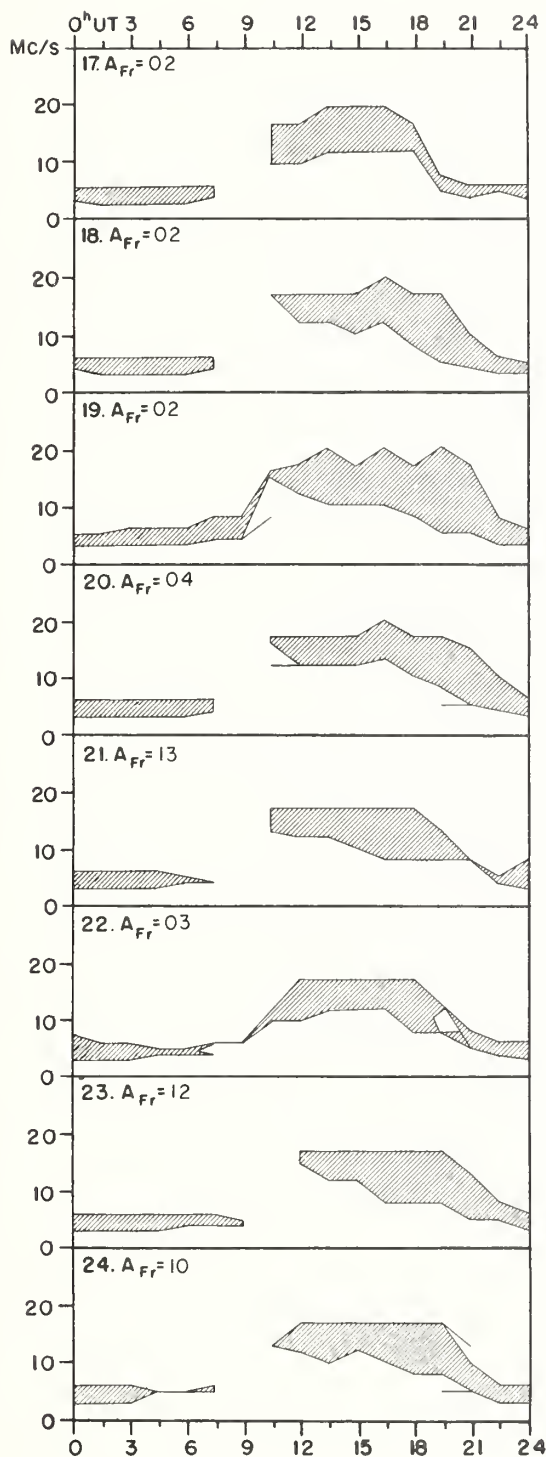
HIGH LATITUDE



FEBRUARY 1965



FEBRUARY 1965



Adapted from Observations by Deutsches Bundespost

IQSY ALERT PERIODS

INTERNATIONAL URSIGRAM
AND WORLD DAYS SERVICE

MARCH 1965

| MAR 1965 | TIME OF ISSUE UT | ADVANCE GEOPHYSICAL ALERT | WORLDWIDE GEOPHYSICAL ALERT | | | |
|-------------|------------------------|------------------------------|-----------------------------|----------------|--------|--|
| | | | NO. | TYPE | TIMING | ELABORATION |
| 11* | 0400 | | 165 | Magnetic Calm | Exists | |
| 12 | 0400 | | 166 | +Strat Warming | Begins | Ukraine moving southern Ural Mountains moderate |
| 13 | 0400 | | 167 | Strat Warming | Exists | Sverlovsk region moving northeast moderate |
| | | | | Solar Activity | Exists | New region born |
| 14 | 0400 | | 168 | Solar Activity | Exists | |
| | | | | Strat Warming | Exists | Siberia moving northeastward moderate intensity increasing |
| 15 | 0400 | | 169 | Solar Activity | Exists | |
| | | | | Strat Warming | Exists | North Central Siberia moving northeastward strong intensity increasing |
| 16 | 0400 | | 170 | Solar Activity | Exists | |
| | | | | Strat Warming | Exists | Cosmic event Polcap Absorption North Central Siberia moving Poleward intense |
| 17 | 040 | | 171 | Strat Warming | Exists | North Central Siberia 73° north latitude 140° east longitude moving northeastward intense |
| 18 | 0400 | | 172 | Strat Warming | Exists | North of Wrangel Island 76° north latitude 179° west longitude moving eastward intense |
| 19 | 0400 | | 173 | Strat Warming | Exists | North of Bering Strait 78° north latitude 170° west longitude moving Northern Canada intense |
| 20 | 0400 | | 174 | Strat Warming | Exists | North of Alaska 76° north latitude 160° west longitude slowly moving Northern Canada |
| 21 | 0400 | | 175 | Strat Warming | Exists | North of Eastern Siberia slowly moving north-northeastward strong decreasing |
| 22 | 0400 | | 176 | Strat Warming | Exists | North of Eastern Siberia slowly moving northward moderate decreasing |
| 23 | 0400 | | 177 | Strat Warming | Exists | Polar region moderate |
| 24 | 0400 | | 178 | Strat Warming | Exists | Polar region moderate |
| 25 | 0400 | | 179 | Strat Warming | Ends | Polar region |
| | | | | Strat Warming | Begins | Prince Albert Canada moderate increasing moving north |
| 25 | 1410 | Ottawa, Solar Flare 25/1325Z | | | | |
| 26** | 0400 | | 180 | Strat Warming | Exists | Calgary Canada moving Vancouver Island intense |
| 27 | 0400 | | 181 | Solar Activity | Exists | Flares |
| | | | | Strat Warming | Exists | Vancouver Island moving westward moderate weakening |
| 28 | 0400 | | 182 | Solar Activity | Exists | Due west of State of Oregon moving westward moderate decreasing intensity |
| 29 | 0400 | | 183 | Solar Activity | Exists | |
| | | | | Strat Warming | Ends | |
| 31 | 0400 | | 184 | Strat Warming | Begins | In Greenland moving north-northeast moderate |

COMBINE - STANDARDS - BOARD

* February 5 - 9, 1965 has been designated as a Interplanet Riometer Retrospective World Interval. This information was sent with March 11, 1965 Geophysical Alert.

** The following dates were designated as Riometer 1964 Retrospective World Intervals: 3-4 January, 4-5 March, and 6-9 September. This information was sent on March 26, 1965.

+ Strat=Stratospheric

